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The Impact of Voice Phonetics
on Audience Perception
in the Context of Activist Video

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Resumo

O objetivo desta tese é investigar a influência de diferentes tons de voz femininos na perceção de um vídeo ativista por parte do público. O tom de voz desempenha um importante papel na perceção de um orador e, por isso, investigámos a sua influência na perceção de um vídeo ativista de propaganda dos direitos da mulher. Os movimentos feministas e de direitos da mulher ainda existem atualmente e apoiam e ajudam, de várias formas, mulheres nos seus desafios. Os dados que foram recolhidos mostram que há uma influência do tom de voz a nível de perceção do público. Descobrimos uma diferença na perceção de oradoras com diferentes tons de voz, por parte de homens e mulheres. A oradora com o tom de voz mais agudo foi entendida como a mais competente, credível, verídica, confiável e empática. Por outro lado, a oradora com o tom de voz mais grave foi definida como a mais carismática, persuasiva, dominante, compassiva e determinada. Além disso, descobrimos uma diferença notável na perceção entre o público com diferentes níveis de ensino. Os indivíduos com ensino secundário completo atribuíram a maioria dos tons mais elevados à oradora com o tom mais agudo. Já os sujeitos com um grau académico de doutoramento atribuíram a maioria dos tons mais elevados à oradora com o tom mais grave.

Abstract

The aim of this thesis is to research the influence of different female voice pitches on the perception of the audience of an activist video. The pitch of the voice plays and important role in the perception of a speaker and we researched its influence on the perception of an activist video spreading awareness of women's rights. Feminism and women's rights movements are still present today, supporting and helping women with their challenges in various forms. The data we collected show that there is an influence of the voice on audience's perception. There was a difference in perception of speakers with different pitches of voice by both men and women. The speaker with the higher pitch was perceived as the most competent, credible, truthful, trustworthy and empathetic. On the other hand, the speaker with the lower pitch was perceived as the most charismatic, persuasive, dominant, compassionate and determined. Furthermore, there was a noticeable difference in perception between according to a level of education. People with a high school diploma assigned most of the highest values to the speaker with the higher pitch and people with a Doctorate degree assigned most of the highest values to the speaker with the lower pitch of the voice.

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1 Chapter

Introduction

In this thesis we explore the role of the pitch of the voice in the listener's perception of a speaker of an activist video. We chose this topic because of our background in linguistics and a personal wish to help activists, movements and non-profit organisations in spreading their message more successfully. Linguistics encompasses many topics and offers a lot of options to research, of which phonetics is the one that we consider worthy of our attention. Furthermore, we are interested in speech perception and how audience perceive different speakers. Regarding the activism, we used to be a volunteer in a non-governmental organisation, therefore we wish to conduct a research related to this activity. The causes that we personally support are mainly women's rights and environmental awareness.

This chapter addresses the context behind our video. In this context we explain what speech production and speech perception are, provide a view on some tendencies in contemporary activism, and clarify possible misconceptions about feminism. Additionally, we present hypotheses based on our knowledge and scientific research. In this chapter, we also describe methods, which we intend to implement in our research. Lastly, we provide a summarised structure of this thesis.

1.1 Context

We intend to briefly explain the context behind our video, such as the situation of contemporary activism, provide summary of feminist movements and describe the situation of contemporary feminism. In our opinion, we consider it important to provide

this information, since many people have false ideas and prejudices against these topics. Another reason, why we want to provide this information, is to explain on which knowledge we based our video.

Moreover, in this work we briefly explain what is the pitch of the voice, how it is produced and how it is perceived. Speech perception is a topic worthy of attention and we explain how are different voice pitches perceived. Contrary to what you might think, speech perception does not necessarily have to involve only sound, but also visual cues play an important role in successful perception. We explain why and what kind of role they play.

1.1.1 Phonetics

1.1.1.1 Introduction

Language have been an important part of the evolution of human culture and society. The main function of verbal communication is "to transfer information which, besides being factual (i. e., what happened where to whom in what circumstances), may also be of a specific human character (e. g., whether an individual is taken as a valued, respected or ignored member of a speech community) and may also convey emotions, attitudes, beliefs, hopes, desires, etc." (Ferenčík).

The main objective of spoken language is to pass a message to one or more recipients. This message could be everything from simple one-syllable sounds to complex discussions. However, a variety of difficulties may occur when one uses spoken language to express themselves. Differences in language caused by geographic factors, gender, education and social status can create barriers even among those who speak the same language.

1.1.1.2 Phonetics

Phonetics can be defined as a linguistic scientific discipline dealing with speech production and perception. We divide phonetics into 3 branches: articulatory, acoustic and auditory phonetics. In this thesis, the target branch is acoustic phonetics. Acoustic phonetics analyses and describes speech and "researches the actual physical properties associated with the noise that is human speaking, and the physical means they tend to be comprehended by" (Psychology Dictionary). These physical properties are, for example, frequency, intensity, and duration. During the speech production, people use the tongue, lips and vocal organs and during the process of speaking, the most important body parts are the lungs and the respiratory system.

1.1.1.3 Speech Production

In order to produce a sound or speech, the airstream from the lungs must pass between the vocal cords, which are located in the larynx at the top of the windpipe. Vocal cords are two small muscular folds and the space between them is called the glottis. The airstream flows through the vocal cords as they open and close. The flow of airstream from the lungs causes the vocal cords to vibrate, which produces a harmonically rich waveform that is the source of vocal production. The pulses of airstream cause the vibration of the air and vocal tract. "It is possible to vary the frequency of vocal-fold vibration over a wide range, and so to produce the auditory effect of a wide range of 'pitches'. Languages utilize pitch and pitch changes in one (or both) of two distinct ways, known as 'tone' and 'intonation'" (Catford and Esling 431). By adjusting sub-glottal air pressure and vocal fold tension, the speaker can vary loudness and pitch. In case of vowel sounds, the air vibrates at three or four frequencies simultaneously, as long as the position of the vocal organs remains the same.

While airstream is passing through the vocal cords, they can be also apart, as they are normally when breathing out. The voiceless sounds are produced when the vocal cords are apart (Krauss and Pardo 6). In this case, the airstream passes relatively freely to pharynx and voiceless consonants are pronounced. On the other hand, if the vocal cords are adjusted, then the passage between them is narrow. Moreover, the airstream causes them to be sucked together, which results into an interruption of airflow. The pressure below them builds up until they are blown apart again.

The airstream continues from vocal cords to the passages located above it, which are known as the vocal tract divided into the pharynx, the oral tract and the nasal tract. The pharynx is a four-way crossing, where the passages from the oral and nasal tract join and then split into larynx and esophagus. Then the airstream flows through the oral tract and many speech sounds are produced by movements of the lower articulators.

As we see, speech production is not only a cognitive process. Despite involving processes such as conceptualisation, during which concepts and ideas are linked to particular word, and formulation, when the expression is formulated according to linguistic rules of the particular language, it involves also other complex physical and biological processes, which we should be aware of.

1.1.1.4 The Speech Perception

The perception of speech is composed of three parts, which are combined into an order that resemble speech of the given language. These three parts are hearing, interpreting and comprehending. Speech perception is a complex process that can be also described most simply as the transformation of an acoustic signal transmitted from a speaker to an intended communicative message heard by a listener. For the listener, the perception of speech seems to be effortless and automatic (Gierut and Pisoni 253).

However, in order to achieve a successful perception of a speech, it is required to provide it with both visual and auditory cues. The reason, why successful speech perception requires visual cues, is that the visual signals often provide complementary information (Vatakis et al. 1).

The way how a speaker delivers a message is "almost three times as influential as content in determining the effectiveness of attempts to 'sell' an idea" (Heinberg). As we see, the speech and its aspects play an important role in the perception of a speaker's message. This fact should be further explored. Therefore we are interested in researching what is the influence of the pitch in female voices, especially its effects on audience perception of an activist video. This is what we want to focus on in our research.

Moreover, in the current era of digital technologies audiovisual speech is present even more than before. Every day many people watch television or online videos on the Internet. Therefore it seems as a great opportunity to spread awareness about various causes by these popular media. Additionally, in activism, the delivery of a message is essential for a successful campaign. Many campaigns and movements have their own slogans, their speeches are agitating and captivating. A large amount of campaigns conveys messages that are supposed to inspire audience, make the audience act or become more active in the area of the given cause. That is why we deem it worthy to research the influence of voice and its properties on the perception of an activist video, it may help activists in conveying their messages more effectively and with more success.

1.1.2 Contemporary Activism

1.1.2.1 Introduction

Activism is "the policy or action of using vigorous campaigning to bring about political or social change" (Oxford Dictionaries). It is any kind of effort to spread awareness (e. g. about health problems) and to achieve a change in status quo. Activists are people who seek to create positive change. The most common issues addressed by activism are human and animal rights, environmental problems, politics, health awareness. Many people often connote the word "activism" with protest or dissent. However, activism can have a wide range of forms. Today there are many activists, groups, organisations spreading awareness, writing letters to newspapers or politicians, organising strikes, collecting funds, collecting signatures for petitions, blogging, doing voluntary work in order to improve the status quo. In one way or another, activism has become a part of our every day life.

1.1.2.2 Contemporary Digital Activism

Nowadays the form, which compose the substantial amount of activism is digital. This refers not only to the technology used in a campaign, but also to the economic, social, and political context in which such technology occurs. The combination of networks, code, applications, and devices that make up the physical infrastructure of digital activism are used throughout the whole process (Joyce 2). The Internet and digital technology have made organising, spreading awareness and acting easier for activists. Digital activism is mainly non-violent and it seems to be the most effective when social media tools are combined with street-level organisation (Kelley). In recent years digital activism has grown exponentially, mainly because of the ease in which activists are able to get a large number of ordinary citizens involved quickly and

in large numbers, without the authorities being able to track the recruitment efforts (Porter). Furthermore, with the arrival of digital technologies, the shape of campaigning has transformed. It is easier and faster to reach a large group of people. Edwards, Howard and Joyce define a digital activism campaign "as an organized public effort, making collective claim(s) on a target authority(s), in which civic initiators or supporters use digital media" (4). In each country people have their own preferences among digital tools used in campaigns. In average, the most popular are social networks, videos, e-petitions and blogs. Some campaigns have a completely online form and others are only partially online. The right use of the digital tools can help boost the campaign. However, there is no one perfect tool for making a campaign more successful than others. In some cases, using the digital tools might cause even the opposite effect (Edwards, Howard, and Joyce 12).

The Internet has increased accessibility and the ability to connect and communicate with thousands of people within a span of just a few seconds. It has become a tool of activists or organisations wanting to spread a message to a huge audience. The activists all around the world are using the Internet to build their community, organise events and connect with other similar-minded activists outside their physical surroundings. "If the Internet didn't exist, Barack Obama would not be president of the United States," says Ben Rattray, the founder of Change.org. "The fact that the most powerful person in the world wouldn't be in that position without the Internet and organizing online says something" (Kessler). In his 2008 presidential campaign, the Internet was used to target the age group of 18 – 29, who utilise the Internet and new media to acquire political information. This turned out to be a clever step, which largely contributed to his successful election. As we see, the Internet indeed has a huge potential when it comes to organising, spreading messages, gaining

popularity. This is a fact that should not be ignored and rather taken advantage of in campaigning.

1.1.2.3 Activism and Social Media

Among the social networks, Facebook, Twitter, and YouTube seem to be the most popular tools for digital activism in general (Edwards, Howard, and Joyce 4). These social networks with such a high usage numbers have proven beneficial in spreading a message, gaining support and providing information on a subject that might otherwise be overlooked by mainstream media. According to existing research, telecommunications and information policy can contribute to democratisation (Edwards, Howard, and Joyce 7) since they allow to spread information to places where it would be otherwise inaccessible. Digital technology and the Internet enables communication between groups that would be otherwise unable to communicate. After considering the benefits of digital technology, we decided to produce a digital activist video. Such a video can be posted on YouTube, the world's largest user-generated content video-on-demand system (Cha et al. 1357), Facebook, Vimeo and its web address can be additionally spread by other social networks and websites, in order to reach a vast number of audience. These and other online social networks currently comprise a substantial part of the interaction on the Internet. Furthermore, YouTube has not only the largest user-generated content but also the most registered users compared to the other video sharing online social networks. (Figueiredo, Benevenuto, and Almeida). According to Youtube, their Statistics page states that each month more than 6 billion hours of video are watched, 100 hours of video are uploaded every minute and millions of subscriptions happen each day (YouTube). Therefore nowadays video seems as a powerful accessible tool for spreading awareness, ideas, knowledge, publicity, advertising, campaigning. Hence we deem it to be the ideal medium for activist

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movements and spreading awareness.

In terms of activism, we are interested in spreading awareness related to women's rights and feminism. We believe that there are areas and situations in which women struggle and are not given equal opportunities and conditions, such as unequal salaries, education, sexual objectification and harassment. Moreover, there exist many bias related to feminism and feminists. In this thesis, one of our intentions is to briefly explain what today feminism is, what its goals are and who identify themself as a feminist.

1.1.3 The Development of Feminism

1.1.3.1 Introduction

We have chosen women's rights as the topic of our video. Our goal is to research how a speaker in a feminist activist video is perceived, according to their pitch of the voice. Firstly, we would like to answer the question about what feminism is. You might think that it is a movement of angry unattractive misandrists, who want to solve non-existent problems. You might think that feminism took place in 19th and early 20th century and since then has subsided. You might think that all feminists are lesbians. You might think that women have already achieved equality and feminism is not necessary anymore. Such assumptions are far from the reality. We find it important to explain the history of feminism and its streams, since feminism is often accompanied by many misconceptions and preconceived ideas. In order to understand what feminism is, it is necessary to know its history, development and background. What actually is feminism? According to Oxford Dictionaries, feminism is defined as "the advocacy of women's rights on the ground of the equality of the sexes." As we can see, it is an effort or activity of any individual advocating the rights of a woman or women, who are

discriminated or whose rights are denied. According to this definition, anyone can be a feminist. Today there are many activists, groups, organisations fighting for and advocating women's rights. Nowadays we may find many forms of feminism, such as lipstick feminism, girlie feminism, riot grrl feminism, cybergrrl feminism, transfeminism, or just grrl feminism. All of these contemporary feminisms fall within the label of third-wave feminism, or sometimes also called postfeminism. If you are not familiar with third-wave feminism, you may now ask what it is. Sometimes it is defined as a movement defined by contradiction. It is based on the achievements of the first and second wave. Let us start from the beginning with the first-wave feminism.

1.1.3.2 The First Wave of Feminism

The first wave of feminism lasted from 19th to early 20th century. It emerged out of an environment of urban industrialism and liberal, socialist politics. To be specific, feminism was not invented in this period, the advocacy of equity between men and women had been there before. However, it was rather a beginning of an organised, international movement in the western world. In the time period of the first-wave feminism, "women were legally prevented from owning property, executing wills or signing legal documents, serving on juries (even if the defendant was a woman), voting in elections (or even local meetings), refusing to have sex with their husbands, attending university (or depending on race, class, and region, attending school at all), having legal custody of their children (both wives and children were legally owned by husbands), divorcing their husbands" (Bisignani). The feminists from this period fought for abolition of slavery, voting rights (women's suffrage), equal access to education and health care, temperance, and the right to enter and practice in the professions. The first wave was characterised by diverse forms of intervention that continued to inspire later feminist movements. The suffragists personified white, middle-class femininity, while

engaging in very unfeminine practices that were not typical for middle-class. They confronted stereotypes of women and particularly claims of how women should properly behave and talk. One of the approaches, how they fought these stereotypes, was their engagement in public persuasion. Such activity was considered very unfeminine at that time. They were using available political means of persuasion, e. g. signing petitions or lobbying. Another of their approaches was that they challenged the stereotype of housewife and domesticity. The then society dictated that a true woman was supposed to be in the home and take care of her husband and children. Moreover, it was also required for women to be modest, indirect, and not to draw attention to themselves (Kroløkke and Sørensen 3). Some activists used rather radical means of activism, such as hunger strike or picketing. While the first-wave feminism improved the situation of some women, the others were were not affected by it at all.

The first-wave feminism had several forms. One of them was equal-opportunities feminism or equity feminism. This form do not define any distinction between sex and gender and the biological differences between men and women were not seen as a threat to the ideal of human equity. Therefore these differences were not accepted as valid reasons for discrimination.

Another form of first-wave feminism was the liberal first-wave feminism. It paved the way for the second-wave feminism. Many ideas and manifestations of liberal first-wave feminism were introduced by Mary Wollstonecraft, Virginia Woolf and Simone de Beauvoir (Kroløkke and Sørensen 6). The founder of the liberal feminism is considered to be Mary Wollstonecraft. She decided to become a writer dealing with the then political and philosophical issues. In that time period, such a career was considered to be not only unusual, but also unfeminine and unnatural for women. Her most famous work is *A Vindication of the Rights of Woman*. It is widely considered as the first great

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feminist treatise. She promoted individual rights, especially against the restrictions of political power. Her primary concern was the women's rights, and social and legal status. She repeatedly stressed the right and need of women to be educated in the same manner as a man. Wollstonecraft believed that equal education is a path for the women to become emancipated. In her opinion, the equal education of women and men would end the ideal of woman as a docile and decorative companion to man (Laissez Faire). Additionally, she claimed that both women and men should be educated rationally, exercised their natural abilities, and held to the same reasonable standards of behavior (C. Clark). Other influential activists were Elizabeth Cady Stanton and John Stuart Mill.

The first mentioned, Elizabeth Cady Stanton, was an American activist involved also in antislavery. Together with Lucretia Mott, they held the first Woman's Rights Convention at Seneca Falls in New York. The topics covered at this convention were maternity, child rearing, property rights, equal education, employment opportunity, divorce law, temperance, and presidential campaigns (National Women's History Museum). Stanton was actively involved in the movement for women's suffrage and was one of the first feminist theorists in USA. She belonged also to the most productive activists, probably because she was not interested in an intellectual life removed from the social and political events. Stanton was in contact with women and their every day problems, which she tried to solve (Rogers).

John Stuart Mill was a British philosopher and one of the earliest feminists. His most famous work is an essay *Subjection of Women*, which defends gender equality, women's rights, suffrage and equal access to education. In this essay, he argued that the cause of women's oppression was men's physical strength. "He locates the origin of women's oppression in men's physical strength, assuming that the more influence reason has in a society, the less importance physical strength will have. In such a state of

affairs, women would no longer be disadvantaged, as physical strength becomes less important as civilisation progresses. This progress implies the development of reason which, according to Mill, is the same in either sex. Hence the subjection of women in an advanced society has no other basis than habit or custom, both of which are serious hindrances to the full development of reason" (Szapuová 182). Moreover, he claimed that the majority of motives in economics and government were egoistic and self-interested. Male and female interests are in a conflict, because male self-interest is the subjection of women and female self-interest is women's liberation (Wilson). It should be pointed out that Mill was interested in women's emancipation continuously and was, similar as Stanton, involved in it not only as a philosopher but also as an active publicist and politician. He engaged in public debates, legal and social reforms. Additionally, he participated in various forms of women's political struggle against subjection and discrimination. As a member of British parliament he fought for a women's suffrage amendment to the Reform Bill of 1867. A year later he supported the Married Women's Property Bill (Szapuová 180).

In the United States, Europe and Soviet Union, there started to emerge also a socialist feminism and Marxist feminism. Both were developed in workers' unions, in reformist social-democratic parties, and during the rise of communism (Kroløkke and Sørensen 6). Socialist feminists argue, that, in order to change the role of women in the society, a change in economic system is necessary. They also claim, that all women are oppressed, regardless of their class, colour or political views. Additionally, the oppression is not only a result of inequalities between men and women, but also of capitalism and its system. Socialist feminists believe that the interests of women and men can be met through socialism. In their opinion, women's liberation is impossible without socialism, neither socialism is possible without women's liberation (Welch).

Marxist feminism is based on the philosophy of Karl Marx and Frederick Engels. They advocated the liberation of women and argued that women are oppressed by the ruling class. According to them, such oppression results in women having lower status not only in society but also in the family. Engels examined the rise of women's oppression as a product of the rise of class society and of the nuclear family. Moreover, the character of women's oppression had different character in each class. He claimed, that the role of the upper-class woman was to bear children who inherit the family wealth. The purpose of working-class woman is to maintain generation of workers, therefore produce labor power for the system. This results in working-class women being in a conflict situation, where they either choose to produce worker and take care of the family but be financially dependent, or they choose to work, be a part of public production an financially independent but not able to fully devote their time to family (Smith). Out of socialist feminism and Marxist feminism later radical feminism developed, which is a part of second-wave feminism.

1.1.3.3 The Second Wave of Feminism

The second wave of feminism was inspired and based on socialism, neo-Marxism and psycho-analytical theory. It criticised patriarchy, capitalism, the woman's role as wife and mother, and normative heterosexuality as the sources of women's oppression. The dominant matters were sexuality and reproductive rights. The second-wave feminists were actively involved in struggle for passing the Equal Rights Amendment to the Constitution of the United States, guaranteeing social equality regardless of sex. Furthermore, they differentiated sex and gender. According to them, gender is a social construct and has to be differentiated from sex, which is a biological distinction. The second-wave feminism was becoming more and more radical (Rampton). In the late 1960's the second wave of feminism was sparked by protests

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against Miss America Pageants. Radical feminists held several public performances to protest against beauty contests, objectification and oppression of women. According to them, the beauty contests were degrading to women and they compared them to cattle parade. Another of their claims was that women were dominated by patriarchy. The aim of patriarchy was to keep women in the home, with low education or in simple jobs with low pay (Kroløkke and Sørensen 8). The second-wave feminism struggled with getting attention, because during that period of time there were also many other social movements, such as Black Power or the movement to end the war in Vietnam. In order to get attention, second-wave feminists formed women-only organisations and published several publications, e. g. *The BITCH Manifesto* by Jo Freeman.

Apart from radical feminists, there emerged another form of feminism, which was ecofeminism. This form joins together feminism and ecology. It claims that there is a connection between women and nature. "As the environmental movement along with environmental crises raised the consciousness of women to the decay of the earth, they began to see a parallel between the devaluation earth and the devaluation of women" (Brammer). Ecofeminists value characteristics that are considered feminine, such as nurturing, peace, calmness and cooperation. The term ecofeminism was introduced by Francoise d'Eaubonne in her book *Le Feminisme ou la Mort* published in 1974. Ecofeminism challenges structures rather than individuals. Its aim is to replace hierarchical dualisms with diversity and emphasis on the influence of difference (Hobgood-Oster).

We have mentioned radical feminism several times. According to it, the patriarchy has existed in all known human societies and have paved the way for capitalist forms of economic and gender exploitation. Moreover, radical feminists claim that women are a part of their own class and economy. This economy is based on the

unpaid work in the home, the productivity of motherhood, and the function as a workforce (Kroløkke and Sørensen 9). Men are the enemy of women and women need to free themselves from the oppression by radical means and activities, e. g. lesbian relationships and female support groups. Among the causes of patriarchy are the exploitation of women based on biological differences, marriages in which men control women, and heterosexual relationships. Radical feminists argue, that the women are exploited in both the public sphere and the private sphere (Sociology Central). They consider femininity unnatural and imposed. For them, femaleness is natural and positive. Radical feminist groups prefer and attend women only places. It is one of their means of challenging patriarchy and showing their appreciation of women (Hughes 8). Nowadays, when people, who do not have much information about feminism, think about feminism, they associate it with ideas and images that are more common rather in radical feminism. In our opinion, it is important to explain that this is only one of the forms, which feminism has. Other forms may be based on different ideologies and practices.

During the period of the second-wave feminism, different groups of feminists adopted different approaches to feminism. At that point, feminism gradually ceased to be mainly focused on white middle and upper-class class women. Groups of African American women, women from "third world" and lesbians started to speak out more as well. This resulted into different forms, approaches, and the theory of different standpoints and divergences. Consequently, identity politics emerged. The situation called for analysis of how the different systems of oppression according to gender, class, and race are linked together (Kroløkke and Sørensen 12 – 13). Second-wave feminists introduced the distinction between sex and gender, which, to a certain extent, provides an explanation of sameness and diversity of women. It resulted in second-wave

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feminism not being one, but many. The term feminism was not enough to cover rights and needs of all women, it had to be specified, which kind of feminism. Then, based on this understanding, third-wave feminism emerged.

The tendencies and rhetoric of the third wave first appeared in the middle of 1980's when more and more discussions and writings about the intersections of feminism and racism emerged (Kinser 130). The middle 1990's could be considered the beginning of the third wave of feminism. The third wave is based on the achievements of the first and second waves of feminism. The third-wave feminists prefer multivocality over synthesis and action over theoretical justification, compared to the second wave of feminism. Third-wave preference of multivocality and action over theorising results into embracing a philosophy of non-judgement. They embrace ambiguity rather than certainty, engage in multiple positions, and practice a strategy of inclusion and exploration (Kroløkke and Sørensen 11). Moreover, third-wave feminism emphasises an inclusive and non-judgmental approach that refuses to define the boundaries of the feminist political (Snyder). Compared to the first and second wave, the the third-wave feminism is concerned and faced with new threats to women's rights. Third-wave feminism criticises earlier waves for "presenting universal answers or definitions of womanhood and for developing their particular interests into somewhat static identity politics" (Kroløkke and Sørensen 17). Third-wave feminists define their fight for equality as a protest of the younger generation against the narrow definition of power constrained for them by others, including pioneering feminists. Therefore third-wave feminism is less about women seizing power from men. There seems to be no general agreement about who came up first with the term third-wave feminism. Some feminists believe that the first one to come up with it was Rebecca Walker in Ms. Magazine in 1992. Rebecca Walker is a daughter of feminist writer and activist Alice

Walker. Other feminist argue that the first ones to use the term "third-wave" were

Deborah Rosenfelt and Judith Stacey in their 1987 essay *Second Thoughts on the Third*

Wave, in which they claimed that the third wave of feminism was being formed (Evans

and Bobel 208 – 209). Despite being built on the achievements of the second-wave

feminism, the third-wave feminism rejects and destabilises ideas and notions of the

second wave, such as universal womanhood, body, gender, sexuality and

heteronormativity. Contrary to the second-wave feminists, the third-wave feminists

reached for lip sticks, high heals, short skirts, low cut tops. They do not preach what

kind of clothes are the right ones according to feminism, third-wave feminists rather

believe that women should wear clothes they feel good in, whether they are revealing

tight dress or loose sweatpants (Rampton). The main message of the third wave of

feminism is girl power. It means "the idea that women could be powerful while still

being 'girly'—a backlash against older feminist arguments that such stereotypes

perpetuated women's inequality and were purely a symptom of patriarchal society"

(Kendal 237). Another contrast to second-wave feminism is that third-wave feminists do

not see men as enemies, rather as equals and they also treat men in this way, while still

being feminine. The third-wave feminists embrace their sexuality, whether it be

heterosexual, homosexual, bisexual or other. They emphasise the importance of

sexuality and identify with pro-sex attitude. Additionally, this means that they defend

pornography, sex work, bdsm, role play. At the same time they do not deprecate

heterosexuality, intercourse, marriage, and sex toys, as the second-wave radical

feminists did. The aim of third-wave feminists is to remove the stigma, which has been

put on sexual pleasure and sex industry by society. The third-wave feminists strive for

girl power, which they see as authentic, playful and confident. Furthermore, by

describing themselves as bitch, cunt and slut, they aim to shift the meaning of these

words from the negative to the positive. The third-wave feminists want to articulate ways in which various women confront complex intersections of gender, sexuality, race, class, and age related problems. In third-wave feminism they honor contradictory experiences and they renounce categorical thinking (Snyder). "Inclusion suggests that there are no restrictions placed on how or when to be a feminist. This is a feminism that does not judge or place boundaries on those that identify with the movement. This moves away from dichotomies and allows for multiple possibilities. Inclusion is essential to building movement strength and solidarity and appealing to those activists for whom the feminist label felt too narrow and restrictive" (Evans and Bobel 215).

1.1.3.4 The Third Wave of Feminism

The third-wave feminists intend to create a version of feminism that addresses and includes various groups of women. One of the struggles, which women face nowadays, is how mass media and the Internet portray women. Third-wave feminism regards it important to address cultural production and critique, "focusing particular attention on female pop icons, hip-hop music, and beauty culture, rather than on traditional politics per se" (Snyder).

A very powerful weapon, which third-wave feminists use, is the Internet. There exists a considerable amount of e-zines, blogs, videos and websites. The Internet has created cyberfeminism. This form of feminism encompasses several theories and practices while not having a clearly articulated political agenda. It deals with the relationship between gender and digital culture. However, the theoretical and political attitude toward the Internet technology, gender and feminism differ (Daniels 102).

Some cyberfeminists see the Internet economy same way as the real life global economy, which, in their point of view, is the reason for oppression at workplace.

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However, other cyberfeminists consider the Internet as a place where they can organise themselves, and spread the feminist ideas. They see it also as a place of no restrictions in gender representation, behaviour, role, and for them it is a place where they can fully manifest themselves.

1.1.3.5 Feminism and Video

The 20th century's development of technology introduced new means and possibilities of how to express oneself and how to spread one's ideas. In the 1960's feminist video art started to emerge. It was initiated not only by cultural but also technological changes, during the second wave of feminism.

Women video artists found their inspiration for the visual investigations of gender identity in the radical feminist movements. Technological advance and access to portable cameras enabled easier production of video art. Moreover, at this period video art did not have any established definitions, and expectations about aesthetics. Therefore women could portray their own ideas, notions and thoughts without being limited by any patriarchal rules or concepts. Video brought new artistic means and possibilities to present ideas and messages that could not be presented by other media. They viewed video as something that could initiate a media-revolution. It provided the feminist artists with potential to reach more people (The Art Story Foundation 5). At the beginning, editing methods were not available to every one. This resulted in videos being perceived with authenticity. Nevertheless, gradually with time the editing methods and post-production became more available, which brought attempts of modification of space and time in video. Women started exploring this medium and ways how to portray their ideas. They were also exploring its effects on audience and its perception. However, they did not use this medium only to explore and analyse but also to record and

document performances and performance art, which was at that period favoured by many feminists as part of their activism (Blackwell).

In the 1980's the feminist artists focused more on psychoanalysis and post-modern theory. They were not always connected to a social movement but they still advocated women's equality. The definition of feminist art was being expanded. The feminist artists of the 1980's achieved many advances, but women were still far from equality (The Art Story Foundation 4). In the early years of the 21st century, feminists still use video in order to document their performances. For example, in the exhibition *The View From Here* the majority of the artists used video as their medium of choice. It seems that the need for lens-based techniques to document performative practices has not waned till today (Rae). Some feminists use the video in a different way, they make videos and video blogs, which they post on social networks to spread their message.

1.2 Hypothesis

Our hypotheses are based on the knowledge of existing research in the fields of phonetics and speech perception. The mentioned research, studies and information are provided in the chapter dedicated to the literature review. Considering and bearing in mind the discoveries and knowledge from these fields, we posit that the speaker with the lowest voice will be perceived by audience as the most persuasive, competent, credible, trustworthy, determined, and dominant. Women with lower pitches of voice are perceived as more dominant, so we posit the audience will assign to this speaker similar traits, which are stereotypically considered as masculine. On the other hand, the speaker with the highest pitch of the voice will be perceived as the most charismatic, truthful, compassionate, and empathetic. Higher female pitches of voice sound more feminine, therefore we posit the audience will assign this speaker the traits, which are

stereotypically associated as feminine.

1.3 Methods

We came to conclusion that the first step to take should be a practical one. Moreover, in order to produce a video, we need to write a script at first. Therefore our first step will be writing the script. We intend our script to not only advocate women's rights, but also spread awareness and inform about problems and difficulties, which women all around the world have to face every day. Additionally, we decided for our script to be based rather on facts than emotions. In order to fulfill this, we will research world statistics about women and education, their employment and salaries, domestic violence, sexual abuse. Another criterion for our script is that it should address all the major problems that women struggle with, without the video being too long, boring or sterile.

After we finish the script, we will shoot our video with an American English native speaker. The reason why we chose this particular speaker, beside being an American English native, is that she is also an actress and singer, which means that she knows how to work with her voice. The voice of our speaker will be recorded separately, in a radio studio with soundproof walls and high quality equipment. We made this decision because we want to achieve a good quality of the audio record.

Once the shooting and voice recording are finished, we will produce our activist video. Then we will cut the video in 3 parts and each part will have a speaker with different pitch of the voice. We will upload each part of the video on YouTube, since this video social network is the one with the most registered users among the video sharing social networks. Furthermore, we want the audience to watch each part of the video via the medium and in the environment where they would most probably watch

an activist video (TV, the Internet, smart phone), which is another reason for uploading the video on YouTube.

After each part of the video is uploaded, we will create an online questionnaire and embed each part in it. This questionnaire will be distributed via webmail and the Internet. The respondents of this questionnaire will have to watch each part of the video and evaluate how much each speaker is charismatic, competent, persuasive, credible, truthful, dominant, compassionate, trustworthy, determined and empathetic. Once we collect enough responses, we will analyse the results, which we will have received, by calculating mean averages of the values assigned to each characteristic trait.

1.4 Structure

Since we have already provided the context of our work, in the next chapter we mention existing research done in the field of speech and speaker perception. In that chapter we review literature and explain what the motor theory and McGurk effect are. Then we mention certain researches and studies, such as T. Clark and Greatbatch's *Audience perceptions of charismatic and non-charismatic oratory: The case of management gurus*, Klofstad, Anderson and Peters' *Sounds like a winner: voice pitch influences perception of leadership capacity in both men and women*, and Mohammadi and Vinciarelli's *Automatic Personality Perception: Prediction of Trait Attribution Based on Prosodic Features*. These studies researched speech and speaker perception and serve as a certain foundation that we want to build our research on. We also provide and describe activist videos, which are produced in a manner similar to the one we want to approach. These videos are produced by Feminist Frequency and Joyful Heart Foundation. In the following chapter we will explain process of production of our script, shooting of the video, the voice recording and editing the footage. In terms of the visual

part of our video, we intend to keep it simple and focus on the acoustic part. Another

process, which we will describe in that chapter, is the the collection of data. Then, in

another chapter, we will provide the results collected from the audience. Lastly, the final

chapter will be dedicated to the analysis of the results.

2 Chapter

Literature Review

In this chapter we present relevant theories, research and studies from the area of linguistics, speech perception and speaker perception. These studies and theories serve as a base for our own research. Firstly, we introduce and explain the theories, which are the motor theory of speech perception and McGurk's effect. In the following sections, we mention and describe studies on speech and speaker perception, which are similar to our research.

2.1 Introduction

There exists a considerable amount of studies dealing with the pitch of the voice and speech perception. In this chapter we explain the motor theory and McGurk's effect. Furthermore, we mention the studies *Audience perceptions of charismatic and non-charismatic oratory: The case of management gurus*, *Automatic Personality Perception: Prediction of Trait Attribution Based on Prosodic Features*, and *Sounds like a winner: voice pitch influences perception of leadership capacity in both men and women*. Speech is very complex, involves multiple processes and offers many options for research. Therefore there are several sciences, which deal with speech and related processes, e. g. linguistics, neuroscience, psychology, electrical engineering.

According to a researches on male voices by Brown, Strong and Renscher, and by Apple, Streeter and Krauss, it was discovered that "elevating speakers' F0s caused them to be perceived as weaker, less benevolent, competent, truthful and persuasive, and more nervous. Because the analysis/resynthesis procedures available at the time

these studies were carried out did a poor job of reproducing women's voices, both studies used male speakers exclusively, and their results probably should not be generalized to women" (Krauss and Pardo 10). As we see, there obviously is an impact of a voice on the perception of a speaker. Our intention is to research what is the impact of a female voice on the audience perception.

In our research, we intend to provide also visual cues to our audience. The reason for this decision is the known fact, which Campbell explains, that "the mouth, lips, tongue, teeth, and jaw systematically shape the pattern of sound that a talker produces. That is, the production of speech sounds has visible consequences" ("Audio-Visual Speech Processing" 562). Additionally, Campbell claims studies have showed that "all linguistic levels are susceptible to visual influence, and that two main modes of processing can be described: a *complementary* mode, whereby vision provides information more efficiently than hearing for some under-specified parts of the speech stream, and a *correlated* mode, whereby vision partially duplicates information about dynamic articulatory patterning" ("The Processing of Audio-Visual Speech: Empirical and Neural Bases" 1001). Therefore we consider video to be the ideal medium for our purposes.

According to Summerfield, people perceive speech because they reconstruct the patterns of articulation used by a speaker. Moreover, as Campbell mentions in her article, Fowler and Dekle claim that visual and even haptic processes can affect the perception of a speech. Information from these modalities may be integrated with acoustic information via associative mechanisms. The processing system seems to use correspondences between visual and acoustic events ("The Processing of Audio-Visual Speech: Empirical and Neural Bases" 1002).

2.2 The Motor Theory of Speech Perception

2.2.1 Introduction

The motor theory was first introduced and developed by Liberman, Cooper, Shankweiler, Studdert, Kennedy and Mattingly. One of the main claims of the motor theory of speech perception is that there is a recruitment of the motor system or of motor competence (i. e. knowledge) in the perception. The articulators create the pattern of sound produced by a speaker, which means that the production of speech sounds has visible consequences. "Summerfield's analysis suggested that 'the object of perception' in speech is not a specific acoustic signature, but rather the speech gesture itself, characterized by its motoric, acoustic, visible, and somaesthetic correlates" (Campbell, "Audio-Visual Speech Processing" 564). Moreover, the visual cues provided by lower articulators play an important role in production and perception of speech, both of which are audiovisual (Potamianos). In a situation with ideal hearing conditions, the speech representations are dominated by acoustic impressions, but at the same time speech perception cannot be considered as a purely auditory process (Campbell, "The Processing of Audio-Visual Speech: Empirical and Neural Bases" 1002).

Despite its prominence, the theory of motor perception has had a mixed scientific reception within the speech science since it was introduced. However, in the larger field encompassing studies of perception, action, and their coupling, it is given more credence.

2.2.2 The Motor Theory of Speech Perception

The motor theory of speech perception was developed when Liberman and his colleagues found that speech percepts track articulation more closely than the acoustic

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signals to which articulation gives rise. They discovered this because of the results of two experiments. In the first experiment they synthesised syllables /di/ and /du/. The effects of coarticulation of different vowels caused different critical acoustic cues for /d/. These cues were audibly distinct when they were presented in isolation to listeners. However, in natural productions, the gestures for /d/ are the same for both of the syllables and also the consonants sound alike. Then a complementary finding showed that the same acoustic cue was identified as /p/ before the vowels /i/ and /u/, but as /k/ before the vowel /a/. The reason for this was coarticulation. Acoustic speech signals are highly context sensitive due to coarticulation. In order to generate the cue before /i/ or /u/, it requires a production of /p/. On the other hand, in order to generate it before /a/, a production of /k/ is required (Fowler, Galantucci, and Saltzman 705). Based on the results of these two experiments, they came up with the motor theory of speech perception and concluded that speech processing is special, perceiving speech is perceiving vocal tract gestures, and that speech perception involves access to the speech motor system (Galantucci, Fowler, and Turvey 361). Liberman an Mattingly claimed in their *The Motor Theory of Speech Perception Revised* that the connection between the speech production and perception is not acquired by learning but rather it is an innate human ability.

"If speech perception and speech production share the same set of invariants, they must be intimately linked. This link, we argue is not a learned association, a result of the fact that what people hear when they listen to speech is what they do when they speak. Rather, the link is innately specified, requiring only epigenetic development to bring it into play. On this claim, perception of the gestures occurs in a specialized mode, different in important ways from the auditory mode, responsible also for the production of phonetic structures, and part of the larger specialization for language. The adaptive

function of the perceptual side of this mode, the side with which the motor theory is directly concerned, is to make the conversation from acoustic signal to gesture automatically, and so to let listeners perceive phonetic structures without mediation by (or translation from) the auditory appearances that the sounds might, on purely psychoacoustic grounds, be expected to have" (Liberman and Mattingly 3).

Furthermore, there is evidence for perceptual separation and acoustic ascription. Perceptual separation occurs when listeners perceptually separate the acoustic information, e. g. gesture 1, which is in the acoustic domain of a gesture 2, from the acoustic information for the gesture 2. On the other hand, the evidence for acoustic ascription states that listeners ascribe the acoustic consequences of the gesture 1, which is in the acoustic domain of the gesture 2, to gesture 1 (Galantucci, Fowler, and Turvey 369). We will explain more about these phenomenons by mentioning experiments dealing with perceptual separation and acoustic ascription.

2.2.3 Perceptual Separation

The example of perceptual separation was provided in 1980 by Mann and Repp. In their experiment they found that listeners report more "s" along an /s/ to /ʃ/ continuum in cases when the consonant is followed by /u/ than when it is followed by /a/. The vowel /u/ causes coarticulatory lip-rounding in the consonant, which results in lowering its frequency spectrum, and lowering the high frequencies of /s/ toward the lower frequencies of /ʃ/. "The finding of more "s" responses preceding /u/ suggests that listeners are separating the spectrum-lowering effects of anticipatory lip rounding from the acoustic consequences of the consonant" (Galantucci, Fowler, and Turvey 369).

2.2.4 Acoustic Ascription

Later, in 1984, Whalen provided an example of acoustic ascription. In his experiment he presented listeners with /s/ or /ʃ/ consonants, which were followed by the vowels /u/ or /a/. Then the listeners were asked to identify the vowels. Moreover, half of the syllables were cross-spliced so that, for example, the vowel /u/ was spliced onto the consonant /s/ or /ʃ/ that had been produced in the context of the vowel /a/. The other half of the syllables were spliced so that, for example, the vowel /u/ was spliced onto the consonant /s/ or /ʃ/ that had been produced in the context of a different vowel /u/. In case of the cross-spliced syllables, the response times to identify the vowel were longer than the response times of spliced syllables. This was caused by listeners using coarticulatory information for the vowel, which was in the domain of the consonant, as information for the vowel. "They were misled when the information was misleading—that is, in cross-spliced syllables. In short, listeners ascribed to the vowels the acoustic consequences of the vowels present in the consonants, the same acoustic consequences that Mann and Repp (1980) showed were separated from the /s/ and /ʃ/ consonants" (Galantucci, Fowler, and Turvey 369 – 370).

According to the motor theory, speech perception does not happen at the level of the acoustic signal but at the level of articulation. The motor theory says that there exists a link between speech production and speech perception. It is a hypothesis that people perceive speech by identifying the movements of the vocal tract with the articulatory movements rather than by identifying the sound patterns generated by speech. A speech is perceived because the listeners know how sounds are produced by the articulators. (Gierut and Pisoni 260).

2.3 The McGurk Effect

2.3.1 Introduction

Furthermore, as we have mentioned, McGurk effect is another phenomenon that should be considered in the process of speech perception. It is a perceptual phenomenon that demonstrates an interaction between hearing and vision in speech perception. The McGurk effect occurs when the auditory component of one sound is paired with the visual component of another sound. This leads to the perception of a third sound. The combination of visual and auditory cues is associated with both improvement and interference effects. The improvement in intelligibility of speech occurs when speaker's face is visible to the listeners. On the other hand, interference in speech perception occurs during "experimentally induced situations of incongruent stimulation and is generally accompanied by decreases in identification performance and slower reaction times. In the 'McGurk effect', the interference of a phoneme and an incongruent viseme can be strong enough to create an illusory percept." (Campanella and Belin 535). The effect is powerful, robust, and relatively automatic. "There is now abundant evidence that speech processing is a multimodal rather than a unimodal process even for normal hearing listeners presented with clear speech. This was first demonstrated by McGurk and MacDonald" (Green).

2.3.2 The McGurk Effect

The experiments of these researchers demonstrated as the first that perception of a heard sound can be influenced, if the face of the speaker appears to utter a different sound, even though the environment is quiet and hearing conditions are ideal. In such case, the result is a perception of a third sound (Campbell, "Audio-Visual Speech

Processing" 562). McGurk and MacDonald discovered the McGurk effect by accident in 1976, while they were conducting a research on young children's imitation of auditory speech patterns. In their experiment, they dubbed different videos to auditory syllable tokens, in order to distract the children from auditory imitation. The syllable tokens consisted of "ba", "ga", "da", "ka", "ta", "pa". They showed the videos to the child participants. When the participants saw video of "ga" dubbed to "ba", they all reported that they had heard "da". At first they assumed that it must have been caused by a technical error. So they ran the test again, but during that time the participants had to keep their eyes closed. After that it became clear to the researchers that "da" was illusory. "That is, under these specific conditions, the perceiver heard an event which was not present in either the visual or the auditory stimulus. The illusion also held for the unvoiced synthesis (visual 'ka'; auditory 'pa'… hear 'ta'). It was as marked for children as for adults and was found to be relatively insensitive to knowledge of its bases or to lexical or other expectations. The McGurk illusion thus added a new impetus to studies of audio-visual speech" (Campbell, "The Processing of Audio-Visual Speech: Empirical and Neural Bases" 1001). These findings demonstrated that if the acoustic and visual cues are in conflict or are poorly delivered, the visual cues cause the listeners to revise the interpretation of the speech signal. Therefore, incorrect visual cues can distort perception of speech. As we see, such information derived from an auxiliary sensory stream may break the process of speech communication, as in the case of McGurk and MacDonald experiment. In the case of poor delivery, even if a speech contains inspirational and compelling message, its impact can be undermined by a poor delivery (T. Clark and Greatbatch 24). On the other hand, the visual information may also improve it (Greenberg and Ainsworth 12). One reason, why visual information is thought to influence the perception of a speech, is because "associations between visual

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features and phonological representations have been acquired through the experience of watching talkers mouths move while listening to them speak" (Green).

As it has been proven, the motor theory, the McGurk effect, and other mentioned findings play an important role in the field of audiovisual speech perception. They have demonstrated that the perception of speech is not solely an auditory process, even under good listening conditions. Bearing in mind this knowledge, we consider video as the ideal medium for our purposes. Another reason, which shows the advantage and usefulness of audiovisual speech, is that vision can deliver contrasts that are not discriminated well by ear (Campbell, "Audio-Visual Speech Processing" 564).

2.4 Studies on Speech Perception

Results from studies and researches show how important the voice and its characteristics are during the process of perception of a speaker. Their impact on the perception is substantial and it should not be ignored. Therefore we want to research what are the effects of different female voice pitches on the audience of a feminist video.

A set of studies by Reisberg, McLean and Goldfield showed that, even during ideal hearing conditions, there is a gain in speech comprehension in audiovisual speech compared to acoustic only speech. The results in this study were collected by using natural audiovisual speech and extended passages of speech (Campbell, "The Processing of Audio-Visual Speech: Empirical and Neural Bases" 1001). Therefore there is clear empirical evidence that the brain does integrate information from face and voice. In speech, the integration of auditory and visual cues is associated with both facilitation and interference in perception. The facilitation of speech perception occurs when the speaker's face is visible and therefore lip-reading is possible (Campanella and

Belin 535). The gain in intelligibility, which we receive from the visual cues, can be as much as a "14-dB enhancement of signal-to-noise ratio" (Greenberg and Ainsworth 5). Moreover, according to Munhall's study, watching the head movements of the speaker during the speech production improves intelligibility of auditory speech in passages of connected speech, which is taking place in a noisy environment. "For example, larger head movements correlated with both voice frequency (F0) and acoustic amplitude" (Campbell, "Audio-Visual Speech Processing" 565). In a review on integration of face and voice in person perception, Campanella and Belin reviewed behavioural and neuroimaging studies of face-voice integration in the context of person perception. "There is clear empirical evidence that the brain does integrate information from face and voice. A respectable body of research now exists on the cognitive and neural mechanisms that are involved in integrating the sound of speech with the view of the articulating face. These studies demonstrate clear interaction effects and provide increasing detail on the complex network of cerebral regions involved in audiovisual speech perception" (535). Nevertheless, we aim to put the emphasis on the auditory input.

After considering these facts and the importance of visual part of speech, we deem it necessary to provide a visual input, because it improves the probability to achieve the best possible audience perception of a speech. The visual cues play an important role in the speech perception. This claim is supported by the motor theory of speech perception, McGurk effect and scientific studies.

2.4.1 Audience Perceptions of Charismatic and Non-Charismatic Oratory: The Case of Management Gurus

The results of this study showed that the speakers who vary levels of pitch and

volume in their speeches were characterised as highly effective and charismatic (T. Clark and Greatbatch 30). T. Clark and Greatbatch researched whether people consider someone a charismatic speaker because they use in their speeches the features commonly associated with charismatic oratory, or because charisma is formed by factors which vary across different settings. They showed to different audiences recorded extracts from speeches. These speeches were given by Kenneth Blanchard, Stephen Covey, Daniel Goleman, Gary Hamel, Rosabeth Moss Kanter, Tom Peters and Peter Senge, who are widely regarded as influential and successful thought leaders, who give public speeches on the international lecture circuit.

Firstly, the researchers conducted a comparative analysis of the speakers, in order to determine the extent to which they use the verbal and non-verbal practices, which are identified as charismatic and non-charismatic. Such practices were, for example, gaze, variations in volume and pitch, rhythmic shifts, facial gestures and body movement. The researchers analysed 16 speeches given by the aforementioned speakers.

This study consisted of two phases. In the first phase, the researchers instructed 5 groups of managers to watch the recorded extracts of the speeches and rate the speakers either as charismatic or non-charismatic. The second phase consisted of determining whether the factors generally identified as charismatic oratory varied according to the ratings of charisma given by the sample groups. The findings from the second phase showed that the way how the speakers delivered their speech was significant but, in order to be rated as charismatic, it was necessary to use a higher proportion of rhetorical techniques.

This implies that, in this context, not the content but the verbal and non-verbal practices used to deliver a message are what distinguishes a charismatic speech.

However, the results also showed that not every listener reacts positively to every oratory technique used by a speaker rated as charismatic. Therefore each technique has a different impact on each listener. As we see the integration of audio and video contributes to better perception of the speech.

2.4.2 Sounds Like a Winner: Voice Pitch Influences Perception of Leadership Capacity in Both Men and Women

The study on the effects of voice pitch on speaker perception showed that males with lower pitch of the voice are perceived as more attractive, socially dominant and physically stronger. The women with higher pitch are perceived as more attractive. On the other hand, the women with lower pitch of the voice are perceived as more socially dominant (Klofstad, Anderson, and Peters 1). Klofstad, Anderson and Peters researched in their study the influence of the pitch of the voice on perception of leadership capacity in both men and women. They wanted to find out what are the effects of the pitch of the voice on the perception and selection of leaders. They recorded 17 women and 10 men saying "I urge you to vote for me this November". Then they digitally manipulated each recording to produce either a voice with high pitch or low pitch.

They ran two sets of experiments. In the first one, the subjects listened to a pair of female voices. One voice had a higher pitch and the other had a lower pitch. The order of the pairs and which voice was heard first was randomised. After listening to each pair the subjects had to respond which voice they would vote for, if the females were running against each other in an election. Then the subjects marked their responses on a questionnaire. The researchers repeated the same procedure with male voices and a different sample of subjects.

In the second set of experiments, the researchers used similar procedure. In this

set of experiments, the subjects had to listen to all of the pair of female and male voices. One sample of subjects had to respond which voice of the two was more competent. Another sample of subjects had to respond which voice of the two was stronger. The third sample of subjects had to respond which voice of the two was more trustworthy.

The results from the first set of experiments showed that both men and women voted more for the females with lower pitch of the voice. Additionally, females with the lower pitch of the voice were rated as more competent, stronger and more trustworthy in the second set of experiments. In the first set of experiments, both men and women voted more for the male candidates with a lower pitch of the voice. Furthermore, the results from the second set of experiments showed that men rated males with lower pitch of the voice as more competent and stronger. However, there was not any significant difference in being rated as trustworthy between the male higher or lower pitches of the voice. Another result of the experiments is that the male pitch of the voice has no influence on the perception of the speaker's competence. These findings imply that people prefer leaders with lower pitch of the voice, whether they are male or female, therefore such leaders are more likely to win elections.

2.4.3 Automatic Personality Perception: Prediction of Trait Attribution Based on Prosodic Features

The study *Automatic Personality Perception: Prediction of Trait Attribution Based on Prosodic Features* researched attribution of personality traits to unfamiliar speakers. It proposes "automatically mapping prosodic aspects of speech into personality traits attributed by human listeners" (Mohammadi and Vinciarelli 1). In their research on effects of prosodic features on personality perception, Mohammadi and Vinciarelli researched how males with higher pitch are perceived and how females with

higher pitch are perceived by listeners.

The goal of the researchers was to find out what kind of personality is attributed to a speaker in a certain situation. This work quantitatively measures the effect of individual prosodic features on effectiveness of automatic personality perception. Moreover, in this work, a personality assessments is used, as features for predicting personal characteristics, and non-verbal speech features are taken into account.

The researchers proposed automatic personality perception that includes three main steps, which are extraction of low-level short-term prosodic features from the speech signal, estimate of statistical features accounting for long-term prosodic characteristics of speech, and mapping of statistical features into attributed traits. They based the personality representation on Big Five, which are "five broad dimensions that appear to provide a set of highly replicable dimensions that parsimoniously and comprehensively describe most phenotypic individual differences" (Mohammadi and Vinciarelli 2). The researchers used for their experiments 640 speech recordings with 322 speakers. The recordings were extracted from 96 news bulletin broadcasts from a Swiss radio that broadcasts in French language. These recordings were emotionally neutral and did not contain any words that could have been recognised by people who did not speak French. In each recording, there was only one speaker. The aim was to assess the speaker's personality, mainly according to the non-verbal cues. Furthermore, the speakers were divided into two major groups. One consisted of professionals, such as the journalists working for the radio, and the other of non-professionals, who just happened to talk on the radio. However, the subjects were not aware of this distinction.

The subject group consisted of 11 people assessing the speakers' personalities. After listening online to each recording, the subjects had to fill in a questionnaire. The order of the recordings was randomised. Moreover, the recordings were assessed in

separate sessions, which lengths varied from 30 and 60 minutes, and each assessment did not last longer than 60 minutes per day. The final personality assessments, for each recording, were collected by averaging over the scores assigned by each of the judges separately.

The results of these experiments were five-dimensional vectors distributed in a space where each component accounts for a personality trait. These results "show an accuracy ranging between 60 and 72 per cent (depending on the trait) in predicting whether a speaker is perceived to be High or Low with respect to a given trait. The accuracy tends to be higher for Extraversion and Conscientiousness, the two traits people tend to perceive with higher consensus in zero acquaintance scenarios. The accuracy for the latter trait is particularly high with respect to the other works of the literature" (Mohammadi and Vinciarelli 12). All in all, the results showed that males with higher pitch variation are perceived as more dynamic, feminine and aesthetically inclined. On the other hand, females with higher pitch variation are perceived as more dynamic and extravert.

The aforementioned studies serve as inspiration for our research, which we intend to conduct in a similar manner. These studies show that the way a speaker convey their message has an impact on how the speaker is perceived by the audience. The studies proved that the pitch of the voice influences audience perception, which justifies our research and aim to investigate its influence more. We are particularly interested whether our results will be similar to the results of the mentioned studies. Our intention is to show short video clips of speakers with different pitches of the voice to our audience and then ask them to fill in a questionnaire and evaluate the speaker according to the speaker's pitch of the voice. The decision for this procedure was inspired by the studies mentioned in this chapter.

3 Chapter

Activist Videos

This chapter is dedicated to the activist videos that we consider related to our topic. These videos can be also considered as feminist, since they address gender inequality, sexual abuse, domestic violence. Additionally, these videos are produced in a manner similar to the one, in which we want to produce our activist video.

3.1 Feminist Frequency

One of the popular YouTube channels is for example Feminist Frequency. The owner of this channel, Anita Sarkeesian, produces "a video webseries that explores the representations of women in pop culture narratives. Her work focuses on deconstructing the stereotypes, patterns and tropes associated with women in popular culture as well as highlighting issues surrounding the targeted harassment of women in online and gaming spaces" (Feminist Frequency, "Media Kit"). This channel has around 130,000 subscribers. The lengths of the videos vary from around 5 to 25 minutes. Visually the videos are very similar to each other. In each video, there is a medium shot of Sarkeesian, with a single coloured background and a picture or logo related to the current topic of the video. Her make up and clothes are simple and not drawing much attention. In 2012 Anita Sarkeesian ran a campaign on Kickstarter to collect 6,000 dollars for a new series of videos. This campaign triggered great cyber-bullying and sexist harassment. However, Sarkeesian was not quiet about it and posted examples of the bullying and harassment. As a result, her supporters increased the donation up to 160,000 dollars.

3.2 Joyful Heart Foundation

Another channel worth mentioning is Joyful Heart Foundation. The five latest videos on this channel are public service announcement videos. Three of them are labeled as ANTHEM and two of them as EXCUSES. The aim of all these videos is to spread awareness about domestic violence and sexual assaults, and to stop making excuses for them. In each video, we can watch close-ups of actors, athletes and other publicly known people uttering "No more", followed by one of the common excuses for domestic violence and/or sexual assaults. In these videos every one is wearing black non-distracting clothes, which contributes to the visual part of the videos being simple. The main focus is put on the content of the spoken utterances. The medium, which transmits this content, is voice, therefore it plays an important role. Moreover, one of the slogans, on the official website of No More campaign, is "Your voice can end the silence" (No More). This is rather a metaphor, but it might support our claim that the voice in their public service announcement videos play the most important role, since it transmits messages crucial to the campaign.

Our intention is to produce our videos in a similar manner, to the videos from the mentioned channels. We intend to shoot medium shots and close-ups of our speaker. As a background, we prefer something non-distracting, clean and simple. The same criteria applies for the clothes of the speaker. We prefer to make the visual part of the video the least distracting as possible, because we want to put the main focus on the voice of our speaker and the message it conveys.

4 Chapter

Methods

In this chapter we describe the production of our video and the collection of data. We address the steps that we took during this whole process until we collected responses from the audience. Needless to say, our decisions and this whole process were based on our knowledge and information that we acquired from the existing research, which we have mentioned and described before.

4.1 Script

The first step, which we decided to take, was to write a script. Our research required practical work, so we came to the conclusion that it was what we should start with. Since we decided to produce a feminist activist video, one of our goals was to draw attention to the problems and issues that women have to struggle with, only because of their gender. We decided to base the content of our script on the results of world statistics related to women's rights issues. Therefore we researched statistics related to education of women, employment of women, violence and sexual assaults against women. Our intention was to make our video informative and spread awareness based on facts. After acquiring all the necessary facts, we wrote our script. The topics, which we addressed there, are education, unequal salaries, domestic violence, sexual assaults, victim shaming and the pressure of beauty standards. The final version of our script was edited and corrected by the speaker of our video, since she is an American English native speaker. The script and the statistics sources are enclosed in the appendix.

4.2 Video

We decided to shoot medium shots and close-ups (see fig. 1 and fig. 2) on a non-distracting white wall background. The speaker in our video is an American English native speaker, which is why we chose to work with this particular speaker. Another reason, why we chose her, is the fact that she is also an actress and singer, therefore she knows how to work with her voice. In our video, she is wearing non-distracting black clothes. Regarding the equipment, we used tripod and Sony HDR-PJ780 digital camera to shoot our footage.
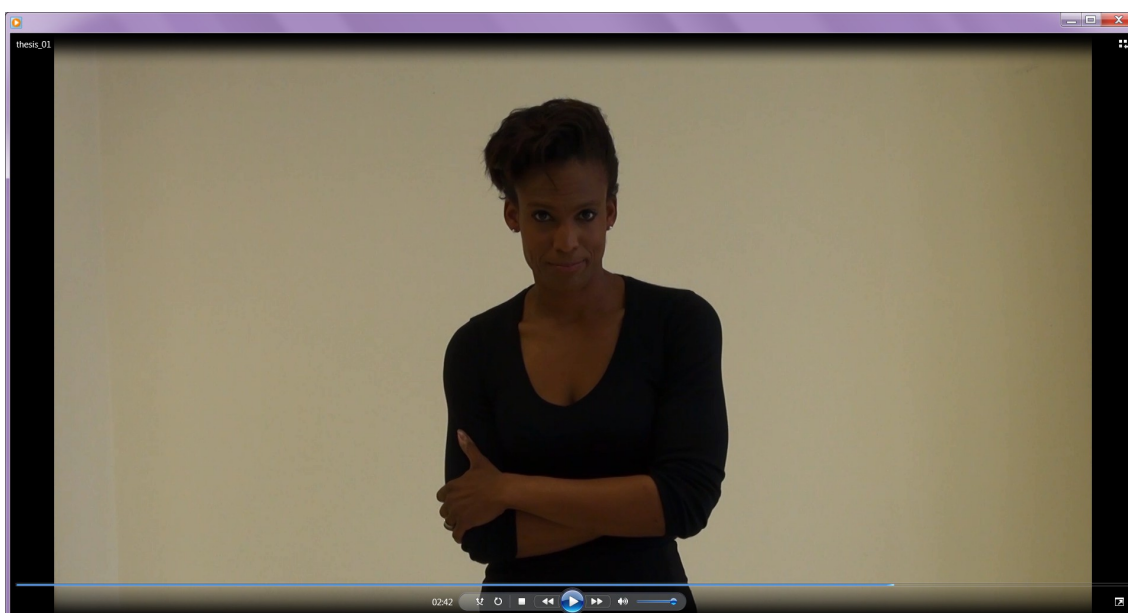
Fig. 1. A medium shot of our speaker[1]

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1 The images, tables and diagrams here presented are authored by the researcher, unless stated otherwise.

Fig. 2. A close-up of our speaker

After finishing shooting, we cut and edited our footage. We produced a video with blurred image (see fig. 3). As we have mentioned before, our intention is to provide the visual input to the audience, in order to achieve better perception of the speech, but at the same time we do not intend to focus the attention on the visual input. According to the aforementioned research, visual cues improve the perception of speech, therefore we decided to provide them to our audience.
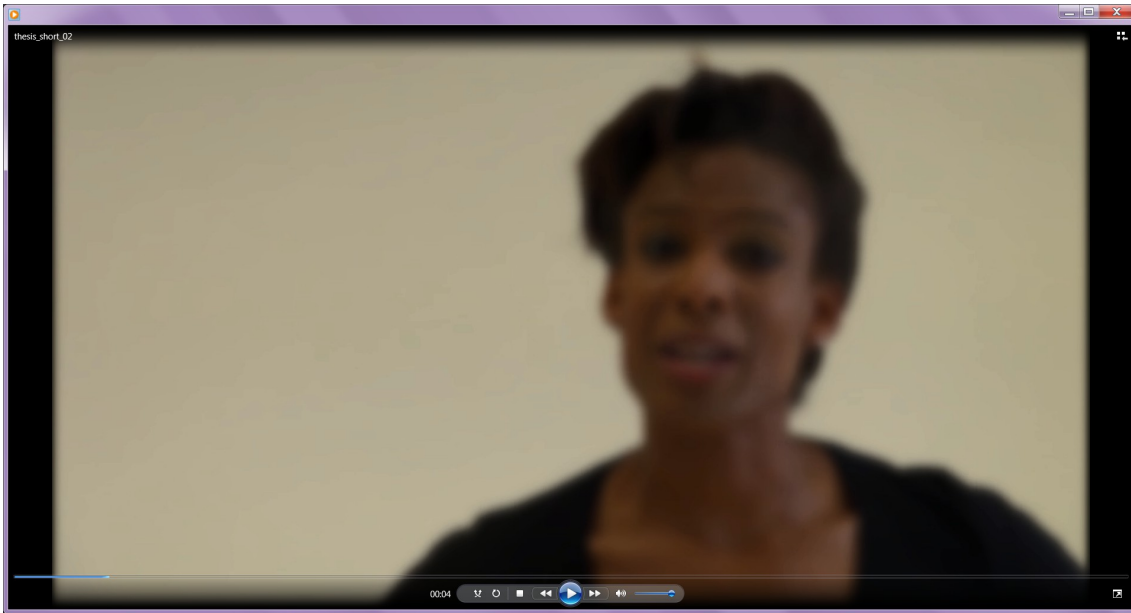
Fig. 3. The blurred image in our video

Moreover, after we finished editing the video, we divided our video into 3 parts. Each part is approximately 1 minute long. Our idea was to show each part with a different voice pitch. We chose this option because we did not want to show the same content each time. Watching repeatedly the same content, although with different pitch, might result into undesired influence in the perception.

After we produced our video and divided it into the 3 parts, we uploaded each part of it on YouTube. As we have mentioned, You Tube is the social network with the largest user-generated content and also the most registered users, among video sharing social networks. Therefore it appears to have a great potential in spreading awareness by activist videos such as ours. Furthermore, we deem it reasonable to let the audience watch, perceive and evaluate our video through the media and in the environment they would most probably watch it in. That is why we decided to distribute an online questionnaire and acquire the responses from the audience in this manner.

4.3 Audio

The voice of our speaker was recorded in a radio studio. We wanted to achieve a good quality of our speaker's voice recording and since we had the possibility to use the studio and the equipment, we deemed it as a good idea to record it there. Among other reasons, for the decision to record the voice there, were soundproof walls and high quality of microphones. We recorded the voice of our speaker while she was reading the script. The environment in the studio was completely silent, there did not occur any interrupting noises.

After recording the voice of our speaker, later we manipulated the pitch of her voice. The natural pitch of the voice of our speaker is 175 kHz. We used a freeware computer program to manipulate the pitch of the voice. The outcome of the pitch manipulation were 2 records. The pitch of one record was lower than the original pitch and the pitch the other was higher than the original pitch. The record with the lower pitch was 160 kHz. The other record, with the higher pitch, was 210 kHz.

4.4 Questionnaire

In order to receive an evaluation of the speakers in our video, we created an online questionnaire. In this questionnaire, we instructed the audience to make sure that they are not distracted by any noise, while watching each part of the video, and focus on the speaker's voice.

However, firstly we asked our audience about their gender, age, employment and education. We asked these questions so that we know some general information about our respondents. Only after they provided this information, they could watch the first part of our video. After watching the first part, the audience had to answer how

charismatic, competent, persuasive, credible, truthful, dominant, compassionate, trustworthy, determined, empathetic they considered the speaker to be on the scale from 1 to 5. Regarding the scale, 1 meant "Not at all" and 5 meant "Very". There was also an option to provide other character traits, if any came to the mind of the audience while they were watching that part of the video. After evaluating the speaker of the first part of our video, the audience watched the second part and they had to evaluate the speaker in the same manner as in the first part. Then the third part of the video followed with the same procedure.

This questionnaire was distributed via our university webmail to the students of the Faculty of Engineering, Faculty of Arts and Humanities and Faculty of Fine Arts of the University of Porto. Additionally, in order to reach more people and get more responses, we also posted the online questionnaire on a research forum of *Thestudentroom.co.uk*. After one week we collected 193 responses.

4.5 Analysis

After we collected responses, we proceeded to the analysis of the results. Since we created our questionnaire in Google Forms, it automatically created graphs of the distribution of gender, age, employment and education. Then we inspected the assigned values and calculated mean values for each character trait and for each group that was representative of population. We present the results of our analysis in the following chapter.

5 Chapter

Results

This chapter is dedicated to the responses that we obtained. We present here information about our audience, the evaluation of the speakers and the results. As we have mentioned, we distributed the online questionnaire with three parts of our video and questions about the speakers. We did not set any limitations or requirements on the audience, our goal was mainly to collect answers from as many people as possible. Eventually we collected responses from 193 people.

5.1 Demographics

Firstly, we asked our audience about their gender, age, employment and education. Now we present this demographic information about our audience. The distribution of gender and education is representative of their distribution in population. However, the distribution of age and employment is not representative. This is caused by the fact that we sent and spread our questionnaire mainly among students.

5.1.1 Gender

Regarding the gender of our audience, the distribution of men and women represents the distribution of men and women in population. Our questionnaire was responded by 99 women, which is 51%, and by 94 men, which is 49%.

Fig. 4. The distribution of men and women providing the number of participants in each group.

"Gender." *Google Forms*. May 2014. Web. 25 July 2014.

5.1.2 Age

The distribution of age is not representative, since the majority of the respondents were in the age group of 18 – 24. To be precise, this amount is 70,5% of all respondents. Then follows the age group of 25 – 34 with 23%, then 35 – 44 with 4,5%, 45 – 54 with 1,5% and 55 – 64 with 0,5%. This is most probably a result of distributing the questionnaire mainly among students.
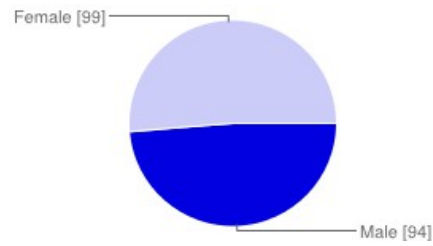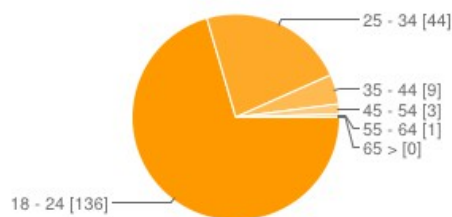

Fig. 5. The distribution according to the age providing the number of participants in each group.

"Age." *Google Forms*. May 2014. Web. 25 July 2014.

5.1.3 Employment

The data for employment are related to the age group. The distribution is also not representative, since the most respondents were students, who constitute 87,5%. They are followed by employed people, who constitute 8%, then unemployed with 2,5%, retired with 1% and other with 1%. Again, this must have been caused by the fact that we had distributed our questionnaire mainly among students.
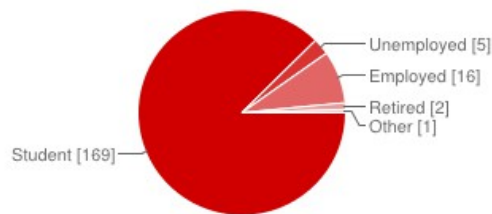
Fig. 6. The distribution according to employment providing the number of participants in each group.

"Employment." *Google Forms*. May 2014. Web. 25 July 2014.

5.1.4 Education

The distribution of data related to education represents the distribution of education in population. The most numerous group (51%) consists of people who has acquired high school diploma. The second most numerous group consist of people with a Bachelor's degree. They constitute 23% of all respondents. Then follows a group of people with a Master's degree, which constitutes 22%. The group of people with a Doctorate degree constitute 3%. The last group are people who stated that they have

achieved other education, they constitute 1% of all respondents.
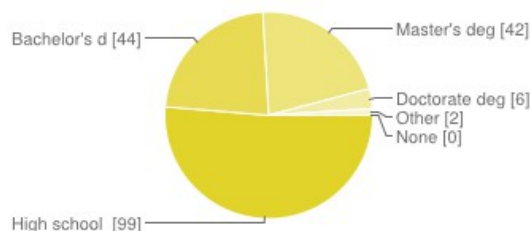
Fig. 7. The distribution according to the acquired level of education providing the number of participants in each group.

"Education." *Google Forms*. May 2014. Web. 25 July 2014.

5.2 Evaluation of The Videos

Our audience evaluated each part of our video in the online questionnaire. After they watched each part of the video, they had to evaluate, on the scale from 1 to 5 (1 meaning "Not at all" and 5 meaning "Very"), how charismatic, competent, persuasive, credible, truthful, dominant, compassionate, trustworthy determined, empathetic they perceived the speaker to be. There was also an option to provide other character traits, if any came to the minds of our audience. We collected the data and analysed it. We calculated mean value for each character trait in each part of the video. Then we compared results of each part of the video.

The following table shows us that the speaker with the pitch of the voice of 210 kHz, from the first part of the video, was perceived as the most competent, credible, truthful, trustworthy, and empathetic. Additionally, the audience added that they

perceived this speaker also as accurate, friendly, catchy, concerned, effective, capable, passionate, and smart.

The speaker from the second part of the video, with the pitch of the voice of 160 kHz, was perceived as the least charismatic, competent, persuasive, compassionate, trustworthy, determined and empathetic. The audience added that they perceived this speaker as smart, passionate, strong minded, persistent, firm, with strong personality. However, the voice of this speaker was also perceived as unnatural, and as a voice of a transvestite.

Lastly, the speaker from the third part of the video, with the pitch of 175 kHz, was perceived as the most charismatic, persuasive, dominant, compassionate and determined. At the same time, this speaker was perceived as the least credible and truthful. According to the audience, they perceived this speaker also as helpful, persistent, and smart.

Table 1

Overall evaluation

	First Video	Second Video	Third Video
charismatic	3,56	3,23	3,82
competent	3,91	3,50	3,60
persuasive	3,48	3,25	3,69
credible	3,87	3,54	3,53
truthful	3,97	3,61	3,61
dominant	3,03	3,46	3,50
compassionate	3,42	3,04	3,58
trustworthy	3,73	3,38	3,45
determined	3,83	3,72	3,88
empathetic	3,63	3,17	3,51

5.2.1 Sorted by Gender

Then we sorted the data according to the gender of our audience. Firstly, we looked into how women evaluated each part of the video. We calculated mean values for each part of the video and compared them (see Table 2). The results are similar to the results from the Table 1. The first speaker ,with the pitch of the voice of 210 kHz, was perceived as the most competent, credible, truthful, trustworthy, determined, and empathetic. Additionally, this speaker was perceived as the least dominant. The second speaker, with the pitch of 160 kHz, was perceived as the least charismatic, competent, persuasive, truthful, compassionate, trustworthy, determined, and empathetic. The third speaker, whose pitch of the voice was 175 kHz, was perceived as the most charismatic, persuasive, dominant, and compassionate. This speaker was also perceived by women as the least trustworthy.

Table 2

Evaluation by women

	First Part	Second Part	Third Part
charismatic	3,79	3,47	4,03
competent	4,1	3,66	3,77
persuasive	3,63	3,44	3,83
credible	4,01	3,82	3,79
truthful	4,1	3,49	3,77
dominant	3,24	3,48	3,61
compassionate	3,55	3,13	3,65
trustworthy	3,9	3,58	3,58
determined	3,95	3,29	3,93
empathetic	3,78	3,03	3,68

Men's perception of speaker's character traits in each part of the video was the same as in the overall evaluation. The speaker from the first part was perceived as the most competent, credible, truthful, trustworthy, and empathetic, which were the same results as in the case of the overall perception. This speaker was also considered to be the least dominant. The second speaker was perceived as the least charismatic, competent, persuasive, credible, truthful, compassionate, trustworthy, determined, and empathetic. The speaker from the third part was perceived as the most charismatic, persuasive, dominant, compassionate, and determined.

Table 3

Evaluation by men

	First Part	**Second Part**	**Third Part**
charismatic	3,33	2,98	3,6
competent	3,7	3,33	3,43
persuasive	3,27	3,04	3,55
credible	3,72	3,24	3,27
truthful	3,83	3,4	3,44
dominant	2,8	3,44	3,38
compassionate	3,29	2,95	3,51
trustworthy	3,54	3,17	3,32
determined	3,76	3,64	3,83
empathetic	3,47	3	3,34

Furthermore, we compared the mean values of the character traits assigned by women with the mean values assigned by men. After closer inspection, we found that the mean values assigned by women were always higher than the mean values assigned by men.

5.2.2 Sorted by Education

Additionally, we calculated the mean values assigned by each level of education group. There were no people who stated that they had not achieved any level of education. The most people had high school diploma (99). Then followed the group of people with a Bachelor's degree (44), Master's degree (42), Doctorate (6) and people who stated that the had acquired other level of education (2).

The most numerous group were the people who had achieved high school diploma. They perceived the first speaker as the most competent, credible, truthful, trustworthy, determined, and empathetic. Moreover, they perceived this speaker as the least dominant. The second speaker was perceived by them as the least charismatic, competent, persuasive, credible, compassionate, trustworthy, determined, and empathetic. The speaker in the third part of the video was perceived by this group as the most charismatic, persuasive, dominant, and compassionate. At the same time, they perceived this speaker as the least credible, and truthful.

The values in the group of people with a Bachelor's degree are similar to the values in the overall perception. The speaker of the first part was perceived as the most competent, credible, truthful, trustworthy, and empathetic. This speaker was also perceived as the least dominant. The second speaker was perceived as the least charismatic, competent, persuasive, credible, truthful, compassionate, trustworthy, determined, and empathetic. The third speaker turned out to be perceived as the most charismatic, persuasive, dominant, compassionate, and determined.

The values assigned by the group of people with a Master's degree differ from the overall values. In this case, the speaker of the first part of the video was perceived as the most charismatic, competent, persuasive, credible, truthful, trustworthy, determined,

and empathetic. The speaker of the second part of the video was perceived by this group of people as the most dominant. Additionally, this speaker was perceived to be the least charismatic, compassionate, trustworthy, and empathetic. The speaker of the third part was perceived as the most compassionate. On the other hand, this speaker was perceived as the least competent, persuasive, credible, truthful, dominant, trustworthy, and determined.

The Doctorate degree group's perception of the speakers also differ from the overall perception. They perceived the first speaker as the most trustworthy. On the other hand, they perceived the first speaker as the least charismatic, credible, truthful, dominant, compassionate, determined, and empathetic. The second speaker was perceived by them as the most truthful, dominant, and determined. Moreover, this speaker was perceived by them as the least competent, persuasive, and trustworthy. The third speaker was perceived as the most charismatic, competent, persuasive, credible, truthful, compassionate, trustworthy and empathetic.

The perception of people with other level of education differed from the overall perception as well. They perceived the first speaker as the most charismatic, competent, credible, truthful, and empathetic. The first and the second speaker were both perceived as the most trustworthy. The second speaker was perceived as the most compassionate. Furthermore, this speaker was perceived as the least charismatic, persuasive. Both the second and the third speaker were perceived as the least credible and truthful. Additionally, the third speaker was perceived as the least competent, and empathetic. The third speaker was perceived as the most persuasive. Lastly, the values for the dominant trait were the same for all the speakers, therefore no speaker was perceived as the most or the least dominant.

In addition, we also compared the mean values of each part of the video between

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all the education groups. We discovered that the the speaker of the first part of the video was assigned the most high values mainly by the people with a high school diploma. The speaker of the second part of the video was assigned the highest values mainly by the people with high school diploma and then by the people with Doctorate degree. In the case of the third part of the video, the most high values were assigned mainly by people with a Doctorate degree. All the parts of the video were assigned the lowest values by the group with other level of education.

Table 4

Evaluation of the first part of the video according to the level of education

	High school	Bachelor	Master	Doctorate	Other
charismatic	3,7	3,34	3,74	2,83	3
competent	3,99	3,93	3,81	3,5	2,5
persuasive	3,55	3,43	3,48	3,17	2
credible	3,93	3,89	3,86	3,17	3
truthful	4,05	3,86	4,02	3,5	2,5
dominant	3,08	2,77	3,24	2,83	2
compassionate	3,56	3,39	3,33	2,5	2
trustworthy	3,77	3,75	3,64	3,83	2,5
determined	4	3,7	3,81	3	3,5
empathetic	3,7	3,52	3,64	3,5	2,5

Table 5

Evaluation of the second part of the video according to the level of education

	High school	Bachelor	Master	Doctorate	Other
charismatic	3,34	3,09	3,14	3,33	2,5
competent	3,58	3,48	3,48	3	2
persuasive	3,34	3,11	3,29	3	1,5
credible	3,66	3,48	3,43	3,5	1,5
truthful	3,83	3,39	3,48	3,83	2
dominant	3,36	3,59	3,6	3,83	2
compassionate	3,19	2,75	3,21	3	2,5
trustworthy	3,48	3,32	3,21	3,5	2,5
determined	3,76	3,57	3,76	4	3,5
empathetic	3,25	3,02	3,07	4	2

Table 6

Evaluation of the third part of the video according to the level of education

	High school	Bachelor	Master	Doctorate	Other
charismatic	3,97	3,73	3,6	3,83	3
competent	3,76	3,52	3,38	3,83	1,5
persuasive	3,81	3,73	3,1	4,17	2,5
credible	3,7	3,5	3,24	3,83	1,5
truthful	3,75	3,52	3,4	3,83	2
dominant	3,6	3,61	3,19	3,67	2
compassionate	3,71	3,5	3,45	3,33	2
trustworthy	3,6	3,36	3,21	3,83	2
determined	3,95	3,86	3,57	3,83	3,5
empathetic	3,56	3,43	3,5	4,17	1,5

6 Chapter

Analysis

This chapter is dedicated to the analysis of data, which we collected from the audience. There are some implications that we can draw from the responses to our questionnaire. Since the collected results of the perception according to the gender of our audience are similar to the overall results, we analyse the overall results and apply the findings on the results from each gender. However, the results according the the acquired level of education differ, so we analyse them separately.

6.1 Demographics

After analysing the demographic information, which we obtained from our respondents, it became apparent that the majority of the respondents (70,5%) had been people in the age group of 18 – 24. Moreover, the majority of our respondents (87,5%) were students. Considering these facts, we therefore assume that the most numerous group of respondents were students in the age group of 18 – 24. According to Eurostat statistics from 2011, "female graduates outnumbered male graduates by a ratio of approximately three to two" in the EU countries (Eurostat). Our respondents were also mainly students from the EU countries and so they were from an environment, where women are educated and seen as independent, ambitious, clever, and they compose the majority of the university students. This may have had an influence on the results. Furthermore, the students are generally considered to be more open-minded, liberal, active and supportive of various causes, which also may have influenced the values that they assigned to each character trait. Another factor to consider, coming from such

environment, where women and men have equal status and rights, may have had an influence on the perception of each speaker. All of these factors and the environment may have created certain associations and preconceived ideas about various pitches of the voice, according to which the audience may have evaluated the speakers.

6.2 Overall Analysis and Analysis According to The Gender

Let us analyse what the values, assigned by the audience, imply. The speaker from the first part of the video had the highest pitch of all the speakers. Our audience perceived this speaker as the most competent, credible, truthful, trustworthy, and empathetic. Additionally, the female part of our audience perceived this speaker as the most determined. In general, as we have mentioned in the second chapter of our work, the higher pitch of the voice is associated with traits and qualities considered to be stereotypical for women. Our assumption, based also on the character traits provided by the audience, is that the audience perceived this speaker as the stereotype of a woman. Moreover, the content of our video is about women's rights and support for women. Thus we assume that the combination of the stereotype and this content resulted in our audience perceiving the first speaker as qualified to address this topic, and so as the most competent, credible, truthful and trustworthy. Regarding empathy, it is a trait stereotypically attributed to women, which shows again the influence of the stereotype, since this speaker was perceived as the most empathetic.

The speaker from the second part of the video, with the lowest pitch of the voice, received the majority of the lowest values. We assume that this was caused by the audience perceiving this speaker, with the lowest pitch, as the opposite of the stereotype of a woman and female voice. They may have perceived this speaker rather as a masculine woman. Moreover, this speaker may have sounded unnatural to a part of the

audience, as some of the audience members stated in the section for other character traits. Therefore they did not perceive this speaker to believably represent the content of our video and they did not assign any of the highest values to this speaker.

The speaker from the third part of the video was perceived as the most charismatic, persuasive, dominant, compassionate, and determined. The pitch of this speaker is lower than the pitch of the first speaker but higher than the pitch of the second speaker. We assume that, in contrast to the first speaker, the audience perceived the pitch of the third speaker rather in the lower range. Furthermore, as we have mentioned before, the women with lower pitch of their voice are perceived as more dominant, with better leadership qualities and qualities that are stereotypically attributed rather to men. The audience have confirmed this fact by evaluating this speaker as the most charismatic, dominant, persuasive, determined, and by the character traits provided by the audience.

6.3 Analysis According to The Level of Education

The perception of the speakers, according to the acquired level of education, shows results, which differ from the overall results. This is the reason why we decided to analyse them separately. There was an obvious difference between the values assigned by the people with a high school diploma and the people with a Doctorate degree.

Firstly, we inspected the perception of the first speaker. It is worth noticing that this speaker received the majority of the highest values by the people with a high school diploma. We sought for possible causes of these results. It should be considered that our respondents with a high school diploma are from environment where the amount of men and women is more or less even, as we distributed the questionnaire mainly among

Portuguese students and users of a UK student website. Furthermore, there are more female upper secondary education graduates than male in almost all OECD countries (OECD 44). So, in the group of people with a high school diploma, women may have been seen as successful, strong, independent. Therefore we assumed that the respondents in this groups had assigned the highest values to the speaker with the highest voice because this voice sounded the most feminine to them and may have represented to them an adequate advocate of women's rights.

The speaker of the third part was assigned the majority of the highest values by the people with a Doctorate degree. It is an intriguing result that the people with a high level of education assigned the majority of the highest values to the speaker with a lower pitch of the voice. We assume that this was caused by the fact that the lower female voice is associated rather with stereotypical male traits. Moreover, as we mention in our script (see Appendix), the majority of scientific researchers are men. Another factor to be considered as well is that women are under-represented in scholarly publishing (Wilson). So we assume that the people with a Doctorate degree assigned the majority of the highest values to the third speaker because this speaker represents authority, leadership, competence for them, since they are in a male dominated environment.

7 Chapter

Discussion

After analysing our results, we have concluded that the pitch of the voice indeed impacts the audience perception of an activist video. There were differences in the values that were assigned to each speaker by the audience. Furthermore, the conclusions drawn from our results are in accord with findings from the research in this field, which we have mentioned in the second chapter.

Since we distributed our questionnaire via our student webmail and by posting it on a students' website research forum, we should consider that the sound and hearing conditions of the environment, in which the audience watched the parts of the video, may not have been perfect for our audience. This may have influenced the perception of our audience and consequently the values that they assigned to each speaker. On the other other hand, we should also consider that such environment and conditions are the ones, in which the audience would most probably watch activist videos.

In the overall evaluation and evaluation according to both genders, our results confirmed that the higher female voice pitches are associated rather with traits stereotypically female, since the speaker with the higher pitch of the voice was perceived as the most empathetic and competent, credible, truthful, trustworthy in addressing the topic of women's rights. On the contrary, the lower female pitches of the voice are associated rather with traits considered to be stereotypically male, which our audience confirmed by perceiving the speaker with lower pitch of the voice as the most charismatic, persuasive, dominant, compassionate, determined, and at the same time as

the least credible and truthful. These findings are in accord with the current knowledge and research. However, if the female pitch of the voice is too low, then the audience perceive the speaker as the least charismatic, competent, persuasive, truthful, compassionate, trustworthy, determined, and empathetic in the context of a feminist video. Additionally, a female voice with a very low pitch may be seen as unnatural or too masculine. These findings should be considered in the process of choosing a speaker with an appropriate voice for the appropriate impact.

Furthermore, after a closer inspection we discovered an intriguing finding. There emerges a difference in the perception of a speaker based on the acquired level of education. The results showed us that the speaker with the higher pitch of the voice received the majority of the highest values from the people with a high school diploma. They perceived this speaker as the most competent, persuasive, credible, truthful, compassionate, determined, and empathetic. The speaker with a lower, but not too low, pitch of the voice received the majority of the highest values from the people with a Doctorate degree. This group perceived the third speaker as the most competent, persuasive, credible, truthful, dominant, trustworthy, and empathetic. The difference may have been caused by the environments, in which people with the different levels of education are. We consider this to be an important finding, which may help producers of activist videos in their future work. Especially in the process of deciding who is their target audience and how they want to approach this audience.

7.1 Future Research

As objectives for future research, we would suggest to conduct a research, on the impact of the pitch of the voice on the perception of an activist video, with a more representative age group. The majority (70,5%) of our respondents were in the age

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group of 18 – 24. This is related to the fact that the majority (87,5%) of our respondents were students, which also was not a representative sample of population.

Furthermore, we suggest to research more the impact of voice and its properties on people with different levels of education. Researching what impact different voices have on people with different levels of education might bring beneficial results. Such findings may help video producers approach their target audience more successfully, and influence the audience more effectively. Moreover, it would be also worth researching what are the reasons causing different perceptions among these groups.

A fact that should be considered is that a voice, its aspects, and speech in general are used in certain areas as tools to influence, persuade, and manipulate an audience in a certain way. In politics, the politicians use their voice and oratory techniques to convey an ideology. Advertisers manipulate voices to be appealing, attractive, a stereotype symbolising certain admired qualities. People are exposed to these effects and techniques every day. We deem it useful and worthy to research whether these effects and techniques could be implemented in activist videos as well, in order to spread awareness, and help various causes with a more success.

Another aspect to research could be the impact of a voice and its properties in activist videos addressing different topics. Especially whether there is any preference for certain voices in certain topics, e. g. whether people prefer a certain type of a voice addressing environmental issues more than another type of a voice. Again, such findings would be helpful to activists in spreading awareness about their causes.

Bibliography

Apple, William, Lynn A. Streeter, and Robert M. Krauss. "Effects of Pitch and Speech

Rate on Personal Attributions". *Journal of Personality and Social Psychology* 37

(1979): 715 – 727.

Bisignani, Dana. "History of Feminism: The First Wave."

Genderpressing.wordpress.com. The Gender Press, 26 Aug. 2013. Web. 11 Mar.

2014.

Blackwell, Diane. "Feminist Video Art as Forerunner to Postmodernism." *Theory Now*

Blogspot. Theory Now, 14 Feb. 2008. Web. 18. Mar. 2014.

Brammer, Leila R. "Ecofeminism, the Environment, and Social Movements."

Homepages.gac.edu. Gustavus Adolphus College, 1998. Web. 12 Mar. 2014.

Brown, B. L., W. J. Strong., and A. C. Renscher. "Fifty-Four Voices from Two: The

Effects of Simultaneous Manipulations of Rate, Mean Fundamental Frequency,

and Variation of Fundamental Frequency on Ratings of Personality From Speech."

Journal of the Acoustical Society of America 55(1974): 313 – 318.

Campanella, Salvatore, and Pascal Belin. "Integrating Face and Voice in Person

Perception." *Trends in Cognitive Sciences* 11.12 (2007): 535 – 543. Web. 25 Mar.

2014.

Campbell, Ruth. "Audio-Visual Speech Processing." *Encyclopedia of Language &*

Linguistics. Elsevier, 2006. Web. 5 Apr. 2014.

Campbell, Ruth. "The Processing of Audio-Visual Speech: Empirical and Neural

Bases." *Philosophical transactions of the Royal Society of London* 363 (2008):

1001 – 1010. Web. 15. May 2014.

Catford, John C., and John H. Esling. "Phonetics, Articulatory." *Encyclopedia of Language & Linguistics*. Elsevier, 2006. Web. 5 Apr. 2014.

Cha, Meeyoung, et al. "Analyzing the Video Popularity Characteristics of Large-Scale User Generated Content Systems." *Networking, IEEE/ACM Transactions on* 17.5 (2009): 1357 – 1370. Web. 22 Apr. 2014.

Clark, Cat. "Mary Wollstonecraft." *Feministforlife.org*. Feminist for Life, n. d. Web. 11 Mar. 2014.

Clark, Timothy, and David Greatbatch. "Audience Perceptions of Charismatic and Non-Charismatic Oratory: The Case of Management Gurus." *The Leadership Quarterly* 22.1 (2011): 22 – 32. Web. 22 Apr. 2014.

Daniels, Jessie. "Rethinking Cyberfeminism(s): Race, Gender, and Embodiment." *WSQ: Women's Studies Quarterly*, 37 (2009): 101 – 124. Muse.jhu.edu. Web. 15 Mar. 2014.

Edwards, Frank, Philip N. Howard, and Mary Joyce. "Digital Activism and Non-Violent Conflict," *Digital Activism Research Project*. Seattle: University of Washington, Nov. 2013. 34. Web. 5 Apr. 2014.

Eurostat. "Tertiary education statistics." *Eurostat European Comission*. European Comission, Sep. 2012. Web. 21 Feb. 2014.

Evans, Meredith A., and Chris Bobel. "I Am a Contradiction: Feminism and Feminist Identity in the Third Wave." *New England Journal of Public Policy*, 22.1 (2007): 207 – 222. Scholarworks.umb.edu. Web. 14 Mar. 2014.

Feminist Frequency. "Home." *YouTube*. YouTube, LLC, n. d. Web. 18 Apr. 2014.

Feminist Frequency. "Media Kit." *Feministfrequency.com*. Feminist Frequency, n. d.

Web. 17 Apr. 2014.

Ferenčík, Milan. "Theory of Verbal Communication." *A Survey of English Stylistics.* Prešov: University of Prešov, 2004. Pulib. Web. 18 Feb. 2014.

Figueiredo, Flavio, et al. "The Tube over Time: Characterizing Popularity Growth of Youtube Videos." *Proceedings of the fourth ACM international conference on Web search and data mining.* 1935925: ACM, 2011. Web. 22 Apr. 2014.

Fowler, Carol A., and Dawn J. Dekle. "Listening with Eye and Hand: Crossmodal Contributions to Speech Perception." *Journal of Experimental Psychology: Human Perception and Performance* 17 (1991): 816 – 828. Print.

Fowler, Carol A., Bruno Galantucci, and Elliot Saltzman. "Motor Theories of Perception." *The Handbook of Brain Theory and Neural Networks.* Ed. Michael A. Arbib. MIT Press, 1995. 705 – 707. Web. 17 May 2014.

Galantucci, Bruno, Carol A. Fowler, and M. T. Turvey. "The Motor Theory of Speech Perception Reviewed." *Psychonomic Bulletin & Review* 13.3 (2006): 361 – 377. Web. 17 May 2014.

Gierut, Judit A., and David B. Pisoni. "Speech Perception." *Handbook of Speech-Language Pathology and Audiology.* Eds. Lass, N. J.Decker, 1988. Web. 21 Apr. 2014.

Green, Kerry P. "Studies of the Mcgurk Effect: Implications for Theories of Speech Perception." *Fourth International Conference on Spoken Language Processing 1996 Philadelphia.* 3 – 6 Oct. 1996, Philadelphia. Web. 17 May 2014.

Greenberg, Steven, and William Ainsworth. "A Multi-tier Framework for Understanding Spoken Language." *Listening to Speech: An Auditory Perspective.* By Greenberg. Mahwah, NJ: Lawrence Erlbaum Associates Publisher, 2006. *Silicon-Speech.com.*

Web. 2 Mar. 2014.

Heinberg, Paul. "Relationships of Content and Delivery to General Effectiveness."

Speech Monographs, 30 (1963). 105 – 107. Taylor & Francis. Web. 22 Mar. 2014.

Hobgood-Oster, Laura. "Ecofeminism: Historic and International Evolution." *Ufl.edu*.

University of Florida, 18 Aug. 2002. Web. 12 Mar. 2014.

Hughes, Christina. "The First Women's Liberation March 1971." *Second Wave*

Feminism. University of Warvick, 2010. Web. 13 Mar. 2014.

Joyce, Mary. "Introduction: How to Think About Digital Activism." *Digital Activism*

Decoded: The New Mechanics of Change. Ed. Mary Joyce. New York:

International Debate Education Association, 2010. 1 – 14. Web. 21 Mar. 2014.

Joyful Heart Foundation. "Home." *YouTube*. YouTube, LLC, n. d. Web. 30 Apr. 2014.

Kelley, Peter. "Study Shines Light on What Makes Digital Activism Effective."

Washington.edu. University of Washington, 20 Nov. 2013. Web. 21 Apr. 2014.

Kendal, Evie. "There's No One Perfect Girl: Third Wave Feminism and The Powerpuff

Girls." *Colloquy: text theory critique*, 24 (2012): 234 – 252. Monash University.

Web. 15 Mar. 2014.

Kessler, Sarah. "Why Social Media Is Reinventing Activism." *Mashable*. Mashable, 9

Oct. 2010. Web. 16 May 2014.

Kinser, Amber E. "Negotiating Spaces For/Through Third-Wave Feminism," *NWSA*

Journal, 16.3 (2004): 124 – 153. JSTOR. Web. 13 Mar. 2014.

Klofstad, Casey A., Rindy C. Anderson, and Susan Peters. "Sounds Like a Winner:

Voice Pitch Influences Perception of Leadership Capacity in Both Men and

Women." *Proceedings of the Royal Society B: Biological Sciences* (2012). Web.

28 Apr. 2014.

Krauss, Robert M., and Jennifer S. Pardo. *Speaker Perception and Behaviour: Bridging Social Psychology and Speech Science*. n. d. Web. 19 Feb. 2014.

Kroløkke, Charlotte, and Anne Scott Sørensen. "Three Waves of Feminism: From Suffragettes to Grrls." *Gender Communication Theories & Analyses: From Silence to Performance*. Thousand Oaks, CA: SAGE Publications, Inc., 2006. 1 – 25. SAGE knowledge. Web. 11 Mar. 2014.

Laissez Faire. "Mary Wollstonecraft, Founder of Classical Liberal Feminism." *Lfb.org*. Laissez Faire, 20 Dec. 2011. Web. 11 Mar. 2014.

Liberman, Alvin M., and Ignatius G. Mattingly. "The Motor Theory of Speech Perception Revised." *Cognition* 21.1 (1985): 1 – 36. Web. 17 May 2014.

Mohammadi, Gelareh, and Alessandro Vinciarelli. "Automatic Personality Perception: Prediction of Trait Attribution Based on Prosodic Features." *IEEE Transactions on Affective Computing* 3.3 (2012): 273 – 284. Web. 28 Apr. 2014.

Munhall K. G. et al. (2003). "Visual Prosody and Speech Intelligibility. Head Movement Improves Auditory Speech Perception." *Psychological Science* 15: 133 – 137.

National Women's History Museum. "Elizabeth Cady Stanton (1815 – 1902)." *Nwhm.org*. National Women's History Museum, n. d. Web. 11 Mar. 2014.

No More. "No More: Together We Can End Domestic Violence & Sexual Assault." *Nomore.org*. No More, n. d. Web. 30 Apr. 2014.

OECD. "Education at a Glance 2013: OECD Indicators." *OECD*. OECD Publishing, 2013. Web. 27 May 2014.

Oxford Dictionaries. "Activism." Def. *Oxforddictionaries.com*. Oxford Dictionaries, n.

    d. Web. 21 Mar. 2014.

Oxford Dictionaries. "Feminism." Def. *Oxforddictionaries.com*. Oxford Dictionaries, n.

    d. Web. 11 Mar. 2014.

 Porter, Nathan. "Social Media Stew Plays Potent Role in Global Digital Activism."

    Washington Times. Washington Times, 13 Oct. 2013. Web 15 May 2014.

Potamianos, Gerasimos. "Audio-Visual Speech Processing: Progress and Challenges."

    Proceedings of the HCSNet workshop on Use of vision in human-computer

    interaction - Volume 56. 1273387: Australian Computer Society, Inc., 2006. Web.

    15 May 2014.

Psychology Dictionary. "Acoustic Phonetics." Def. *Psychologydictionary.org*.

    Psychology Dictionary, n. d. Web. 18 Feb. 2014.

Rae, Clare. "Backflip: A Feminist Walked into a Bar..." *Das Platforms* 27 (2013). Web.

    18 Mar. 2014.

Rampton, Martha. "The Three Waves of Feminism." *Pacific*. The Magazine of Pacific

    University, n. d. Web. 12 Mar. 2014.

Reisberg, D., McLean, J. and Goldfield, A. "Easy to Hear But Hard to Understand: A

    Lip-Reading Advantage with Intact Auditory Stimuli." *Hearing by eye: the*

    psychology of lip-reading. Eds. Dodd, Barbara and Ruth Campbell. Hillsdale, NJ:

    Lawrence Erlbaum Associates, 1987. 97 – 113.

Rogers, Dorothy. "Elizabeth Cady Stanton (1815 – 1902)." *Iep.utm.edu*. Internet

    Encyclopedia of Philosophy, n. d. Web. 11 Mar. 2014.

Smith, Sharon. "Marxism, Feminism and Women's Liberation." *Socialistworker.org*.

Socialist Worker, 31 Jan. 2013. Web. 12 Mar. 2014.

Snyder, Claire R. "What Is Third-Wave Feminism? A New Directions Essay." *Signs*

34.1 (2008): 175 – 196. JSTOR. Web. 14 Mar. 2014.

Sociology Central. "Feminism: Basic Principles." *Sociology.org.uk*. Sociology Central,

2005. Web. 13 Mar. 2014.

Summerfield, A. Q. "Some Preliminaries to A Theory of Audiovisual Speech

Processing." *Hearing by Eye*. Eds. Dodd, Barbara and Ruth Campbell. Hove, UK:

Erlbaum Associates, 1987. 58 – 82.

Szapuová, Mariana. "Mill's Liberal Feminism: Its Legacy and Current Criticism."

Prolegomena. 5.2 (2006): 179 – 191. Web. 24 July 2014.

The Art Story Foundation. "Feminist Art Movement." *The Art Story*. The Art Story

Foundation. Web. 17 Apr. 2014.

"The View from Here." Next Wave Arts Festival. Melbourne. 2010.

Vatakis, A., et al. "Assessing the Effect of Physical Differences in the Articulation of

Consonants and Vowels on Audiovisual Temporal Perception." *Frontiers in

integrative neuroscience* 6 (2012): 71. Web. 23 Mar. 2014.

Welch, Penny. "Strands of Feminist Theory." *Wlv.ac.uk*. University of Wolverhampton,

Feb. 2001. Web. 12 Mar. 2014.

Wilson, Fred. "John Stuart Mill." *The Stanford Encyclopedia of Philosophy*. Eds. Zalta

Edward N. 21 Mar. 2014. Web. 24 July 2014.

Wilson, Robin. "Scholarly Publishing's Gender Gap." *Chronicle*. The Chronicle of

Higher Education, 22 Oct. 2012. Web. 27 May 2014.

YouTube. "Statistics." *YouTube*. YouTube, LLC, n. d. Web. 22 Apr. 2014.

Appendix

Script

They say that a woman's place is in the home. Not always. Nowadays women study at universities, work full-time, travel around the world and pursue their goals.

Did you know that in the EU and USA more women study at universities than men? This is a great achievement but, worldwide only a bit more than a quarter of all scientific researchers are women. There is still some room for improvement in the world of academia.

Unfortunately, not every woman has access to education. In fact, 2/3s of all adult illiterates in the world are women. Education is a fundamental human right that these women are deprived of. We want to be educated too. We want to learn, develop our skills, experience personal growth, have a better future. We want our basic human rights. Education improves our chances of getting a good job and a good job helps us be more independent.

And, while we're talking about jobs, did you know that worldwide, women are paid, on average, 18% less than men? It's not because we work in different fields. It's because we're offered less money. We work as hard as men but get less. We want the same amount for the same work.

After work we all usually go home. They may call it "Home sweet home" but, is it really that sweet for women? 45% of women experience at least one incident of domestic violence in their lifetime and do you know what else happens at home? 6 in 10 sexual assaults – not only in the victims own home but also in the homes of friends, neighbors and relatives. Around 2 in 3 rapes are committed by someone known to the

victim but, more than half of sexual assaults are not reported to the police and 97% of sexual offenders will never spend a day in jail. 97%!

Victims are often shamed into silence. On the one hand, they are told that they have to be attractive, slim and sexy; they have to put on the right makeup, have the perfect body and wear the right clothes. Their value lies in being a beauty object. Media sexualizes women and emphasizes our body parts. You dictate what our standard of beauty should be. On the other hand, if a victim has tried to conform to these, sometimes impossible expectations, then she is to blame for being raped. She is a slut who was asking for it… she deserved to be raped. But, the high number of sexual assaults committed by known assailants suggests that it does not matter what kind of clothes a victim wears. So, Society, please stop blaming women for being raped. Stop shaming victims and start punishing offenders.

Are you content to live in a society that allows these inequalities against your mother, sister, wife, daughter and friends to continue? And who is they? Who is society? Society is me, you and every one around us. In order to achieve change, we have to start from within ourselves. Support women, treat them as your equals because after all… Society is me.

Script – Bibliography

Borzelleca, Daniel. "The Male-Female Ratio in College." *Forbes*. Forbes, 16 Feb. 2012.

    Web. 21 Feb. 2014.

Department of Economic and Social Affairs. "The World's Women 2010: Trends and

    Statistics." *Unstats.un.org*. United Nations, 2010. Web. 21 Feb. 2014.

Euronews. "Gender pay gap: European women still earning less." *Euronews.com*.

    Euronews, 8 Mar. 2013. Web. 22. Feb. 2014.

Eurostat. "Tertiary education statistics." *Eurostat European Comission*. European

    Comission, Sep. 2012. Web. 21 Feb. 2014.

International Trade Union Confederation. "Frozen in Time: Gender Pay Gap Remains

    Unchanged for 10 Years." *ITUC*. International Trade Union Confederation, 7 Mar.

    2012. Web. 22 Feb. 2014.

Polaris Project. "Human Trafficking Statistics: Polaris Project." Polarisproject.org.

    Polaris Project, n. d. Web. 20. Feb. 2014.

RAINN. "Statistics." *Rainn.org*. Rape, Abuse & Incest National Network, n. d. Web. 20

    Feb. 2014.

Ratcliffe, Rebecca. "The Gender Gap at Universities: Where Are All The Men?"

    Guardian Students. Guardian, 29 Jan. 2013. Web. 21 Feb. 2014.

Slut Walk Seattle. "FAQs, Examples of Blaming & Shaming, & General Links."

    Slutwalkseattle.com. Slut Walk Seattle, n. d. Web. 20 Feb. 2014.

Szymanski, Dawn R., Moffitt, Lauren B., and Carr, Erika R. "Sexual Objectification of

    Women: Advances to Theory and Research." The Counseling Psychologist, 39

(2011): 6 – 38. Web. 23 Feb. 2014.

The American Association of University Women. "Introduction." *The Simple Truth About the Gender Gap*. Washington: AAUW, 2013. Web. 22 Feb. 2014.

United Nations. "Human Trafficking: The Facts." *UN.GIFT*. United Nations Global Initiative to Fight Human Trafficking, 2008. Web. 20 Feb. 2014.

We Will Speak Out. "Statistics: Domestic Violence." *We Will Speak Out – Working Together to End Sexual Violence*. We Will Speak Out, June. 2007. Web. 20 Feb. 2014.

Video

Nina H. "1." *YouTube*. YouTube, LLC, 14 May 2014.

    <https://www.youtube.com/watch?v=ku-byLHirJw>.

Nina H. "2." *YouTube*. YouTube, LLC, 14 May 2014.

    <https://www.youtube.com/watch?v=mM2KY3FdI0Y>.

Nina H. "3." *YouTube*. YouTube, LLC, 14 May 2014.

    <https://www.youtube.com/watch?v=2XCWNA31r4Q>.